

**BY ORDER OF THE COMMANDER
56TH FIGHTER WING (AETC)**



AIR FORCE INSTRUCTION 21-101

**LUKE AIR FORCE BASE
Supplement**

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Maintenance

**AIRCRAFT AND EQUIPMENT
MAINTENANCE MANAGEMENT**

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This instruction supplements Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*, dated 12 April 2010, and AFI 21-101_AETCSUP 1, *Aircraft and Equipment Maintenance Management*, dated 21 October 2010, is supplemented as follows. This supplement establishes policies and procedures for aircraft maintenance at Luke Air Force Base (AFB). Procedures outlined in this supplement apply to all maintenance and operations personnel assigned to the Luke AFB. This publication applies to Air National Guard (ANG) or Air Force Reserve Command (AFRC) Units. Additionally, if the publication generates a report(s), alert readers in a statement and cite all applicable Reports Control Numbers in accordance with AFI 33-324, *The Information Collections and Reports Management Program*: Controlling Internal, Public, and Interagency Air Force Information Collections. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR), using the AF Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afrims/afrims/afrims/rims.cfm>.

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. This supplement provides policy and additional guidance. This version incorporates Maintenance Group (MXG) Operating Instructions (OIs) 21-13, 21-23, 21-39, 21-47, 23-1, 36-3, 48-1, 63-1, 24-1, 21-34, and 21-45. It has been revised to consolidate numerous stand-alone OIs and revised hearing protection requirements into one supplement to AFI-21-101.

Chapter 2

SAFETY

2.8.1. (Added) Hazardous Noise Protection.

2.8.1.1. (Added) Responsibilities. Squadron commanders and supervisors will ensure compliance with this instruction.

2.8.1.1.1. (Added) Squadron commanders and supervisors are responsible for notifying Bioenvironmental Engineering (BE) at 6-7521 if hazardous noise producing equipment is used in the work center that is not listed on the shop BE survey.

2.8.1.1.2. (Added) Individuals are not required to carry double hearing protection at all times on the flight line. However squadron commanders will ensure adequate hearing protection is available on the flight line to meet double hearing protection requirements as defined in this instruction.

2.8.1.1.3. (Added) Supervisors will:

2.8.1.1.3.1. (Added) Ensure that all forms of hearing protection and communication equipment, to include communication headsets, have been evaluated by BE.

2.8.1.1.3.2. (Added) Ensure future purchases of all forms of hearing protection and communication equipment, to include communication headsets have a minimum noise reduction rating (NRR) of 29 decibels. Current hearing protection with less than 29 NRR will be replaced through attrition. If a 29 NRR cannot be achieved by using single hearing protection, double hearing protection must be worn in addition to the paragraphs listed in this supplement.

2.8.1.1.4. (Added) Supervisors will instruct users on proper use and care of hearing protection devices (HPD) in the workplace as part of the annual training program.

2.8.1.2. (Added) Use of Hearing Protection: Personnel entering flight line and backshop hazardous noise areas will have access to adequate hearing protection, i.e., ear plugs or ear plugs and ear defenders/headset.

2.8.1.2.1. (Added) The following maintenance personnel hearing protection requirements are established:

2.8.1.2.1.1. (Added) Aircraft operations.

2.8.1.2.1.1.1. (Added) Single hearing protection with a minimum (NRR) of 29 decibels is required when within 200 feet of a running F-16 and outside of the wing tip to wing tip, tail to nose circumference.

2.8.1.2.1.1.2. (Added) Double hearing protection will be used when in the immediate vicinity of an aircraft with engines operating as defined by, within the wing tip to wing tip, tail to nose circumference. Or when involved in engine operations, (ground maintenance runs, launch and recovery, redball maintenance, etc.) in the hush house (outside of cab), on the trim pad, and during End Of Runway (EOR) operations.

2.8.1.2.1.2. (Added) Aerospace Ground Equipment operations.

2.8.1.2.1.2.1. (Added) Single hearing protection with a minimum NRR of 29 decibels is required when you are within 50 feet of a running Generator (-60) or Hydraulic Test stand (MJ-2A-1).

2.8.1.2.1.2.2. (Added) All other powered AGE (including munitions jammers) requires single hearing protection within 25 feet of the operating unit. Exception: MD-4 Electric Generators and FL-1D Light carts do not require any protection because the equipment does not exceed acceptable noise limits.

2.8.1.2.1.3. (Added) Power Hand Tools.

2.8.1.2.1.3.1. (Added) Single hearing protection is required when operating powered hand tools producing noise levels greater than or equal to 85 dBA. These tools should be marked, when feasible, to alert personnel of the potential noise hazard and the required personal protective equipment (PPE). Under certain circumstances, supervisors may require the use of hearing protection when using a tool that does not normally require it. For example: A common drill does not require hearing protection when drilling through soft metals and wood; but it may emit a high-pitch squeal when drilling through harder metals. In this case the supervisor should require the use of hearing protection.

2.8.1.2.2. (Added) Hazardous Noise Areas.

2.8.1.2.2.1. (Added) A hazardous noise area with any exposure at or above 85 dBA shall be clearly identified by signs located at entrances to, or the borders of, the area. Signs should be designed according to the guidelines in DoDI 6055.12 and AFOSHSTD 48-20. As a minimum, signs will state the following message: CAUTION HAZARDOUS NOISE AREA HEARING PROTECTION REQUIRED.

2.8.1.2.2.2. (Added) Personnel entering identified hazardous noise perimeters are required to wear hearing protection when necessary.

2.8.2. (Added) Foot Protection. Protective footwear shall be provided and worn when there is a reasonable possibility of sustaining foot injuries from heavy/sharp objects or electrical/static electricity. All personnel, who's *normal duty* includes aircraft maintenance tasks or lifting objects weighing over 30 pounds, will wear safety shoes.

2.8.3. (Added) Reflective Gear. Personnel exposed to vehicle or aircraft traffic during hours of darkness or periods of reduced visibility will be provided and use a reflective belt. All maintenance personnel will wear a reflective belt while performing duty on the flight line from official sunset until sunrise. Reflective belts will not be worn in a Bandoleer style; but will be worn around the waist of the outer most garment.

2.8.4. (Added) Jewelry. Finger rings will not be worn when performing any aircraft or support equipment maintenance, materials handling or maintenance tasks with moving machinery/parts,

or exposure to energized electrical circuits. Placing tape over rings or wearing gloves on the hand with a ring does not provide protection or eliminate the requirement to remove finger rings

2.8.4.1. (Added) Necklaces or lanyards (metal, cloth, elastic, etc.), except for restricted area badge or a whistle for towing with a lanyards with a breakaway device, will not be worn around the neck when performing hands-on maintenance of any type. NOTE: A whistle (secured by a lanyard that does not breakaway) may be worn around the neck only during aircraft tow operations.

2.8.4.2. (Added) Watches/bracelets will not be worn when performing maintenance with exposure to open circuits or during munitions loading.

2.8.4.3. (Added) When working around energized electrical circuits, metal eyeglasses shall be secured by a band or cord to prevent them from falling into the energized circuits. The band/cord will fit tight enough to not create a potential of catching or snagging during any type of maintenance actions.

2.8.5. (Added) Hangar Door Operation. Only qualified personnel approved by the Squadron Commander or authorized representative and signed off in Integrated Maintenance Data System (IMDS) course code 029003 and 029110 will be authorized to operate the hangar doors. Operators will be thoroughly familiar with operating instructions and precautions necessary for safe operation.

2.8.5.1. (Added) Hangar door operation training will be conducted by each section's training monitor utilizing the combined electric/manual door training power point and hands on training for both electrical and manual doors. Upon completion of the training, the training monitor will update the individual in IMDS with course code 029003 and 029110.

2.8.6. (Added) 150 lb Halon Fire Bottle Requirements. Units are required to accomplish monthly inspections of all possessed 150lb Halon Fire Bottles, in accordance with (IAW) Technical Order (TO) 13F4-4-121. The monthly inspection is a simple "quick check" of the fire bottle for serviceability. Annotate the accomplishment of the inspection on a sticker, card, or tag located on the fire bottle no later than the seventh day of the month.

2.9.1.1. (Added) Vehicles will not be parked and left unattended in front of aircraft hangar doors or entry points. Personnel may temporarily stop vehicles in front of aircraft hangars, with doors open, for loading/unloading, or AGE delivery/pickup.

2.9.1.2. (Added) Low speed and tow vehicles equipped with reflective tape on the front, rear, and sides may be parked in front of aircraft during the hours of darkness without parking lights or flashers turned on. However, these vehicles must be parked in front of an aircraft parking spot and within the white painted line.

2.9.2. (Added) General purpose trailer (non AGE) equipment tie down procedures.

2.9.2.1. (Added) To prevent loss and possible damage to equipment, the vehicle driver pulling the trailer will ensure there are a sufficient number of securely tightened tie down straps to prevent items (pylons, launchers, pods, panels, etc) from tipping or sliding during transport. Straps must make firm contact with each item.

Chapter 3

. GENERAL RESPONSIBILITIES FOR COMMANDERS AND KEY LEADERS

3.2.6. Refer to LUKEAFBI 21-114 *Crashed, Damaged or Disabled Aircraft Recovery*

3.4.1.34. Refer to MXG OI 36-5, *Maintenance Awards Program*.

3.4.1.61. Procedures to Review and Clear Repeat, Recurring, and Cannot Duplicate (CND) Discrepancies.

3.4.1.61.1. (Added) Upgrade the can not duplicate (CND) malfunction symbol to a red X. A 7-level technician will inspect the corrective action and verify all applicable fault isolation procedures were followed.

3.4.1.61.1.2. (Added) The corrective action block of the AFTO Form 781A will reflect what specific actions were taken in accordance with the applicable technical order and the malfunction could not be duplicated. Discrepancies will not be cleared as simply a "CND."

3.4.1.61.1.3. (Added) Aircraft Maintenance Unit (AMU) Officer In Charge (OICs) and/or Superintendents will review actions taken for CND malfunctions.

3.4.1.61.2. (Added) The most qualified technicians will be assigned to troubleshoot repeat/recur discrepancies. Use of Air Force Engineering and Technical Services or Contractor Engineering and Technical Services personnel is encouraged. If needed, squadrons should request technical support from other maintenance activities as appropriate.

3.4.1.61.2.1. (Added) A 7-level technician will inspect the corrective action and verify all applicable fault isolation procedures were followed.

3.4.1.61.2.2. (Added) AMU OICs and/or Superintendents will review actions taken for repeat/recur discrepancies.

3.4.1.61.2.3. (Added) Aircraft over-G and foreign object discrepancies will not be treated as repeat/recur discrepancies unless the cause can be attributed to a malfunctioning aircraft system or sub-system.

3.4.1.72.1.1. (Added) During all aircraft towing operations (day or night), the tow vehicle hazard flashers or beacon light (if installed) will be illuminated. Vehicle pintle-hooks will be stowed in the closed and locked position with the cotter pin installed before leaving the vehicle unattended or prior to vehicle movement.

3.4.1.72.1.2. (Added) Prior to the start of any tow job the tow team supervisor will ensure all conditions of Aircraft Maintenance Configuration Requirements (Attachment 25) are met for aircraft destination. Tow team supervisor will also annotate completed items of the F-16 Hangar (Pre & Post) Entry Checklist (Attachment 26) and secure it to the left forward portion of the fuselage prior to leaving the aircraft. The checklist will remain attached to the aircraft until the aircraft is removed from the hangar, at which time the checklist will be disposed of.

3.4.1.72.1.3. (Added) Hangared aircraft that are unattended must have the canopy closed or the cockpit covered.

3.4.1.73.1.1. (Added) Refer to LUKEAFBI 33-102, *Standardization of Radio Call Signs on Maintenance Radio Frequencies*.

3.5.1.3. (Added) The following paragraphs contain required attendees for the daily production meetings. If a designated attendee is unable to attend, they may identify an appropriate fill-in capable of addressing issues for their specific area of responsibility.

3.5.1.3.1. (Added) Attendees for the 0900 Production Meeting include: MXG/CC and/or MXG/CD, MXG Superintendent, Maintenance Ops Officers/Sq Superintendents, AMU OICs/Chiefs, Wing Weapons Manager, Wing Avionics Manager and representatives from Maintenance Flight, Engine Shop, Fuel Shop, Supply, Air Force Engineering and Technical Service (AFETS), Pratt & Whitney (PW), QA, Analysis, Maintenance Operations Center (MOC), Pod Shop, and Maintenance Operations Flight (MOF).

3.5.1.3.2. (Added) Attendees for the 1600 Production Meeting include: MXG/CD, Boomer 3, AMU/Equipment Maintenance Squadron (EMS)/Component Maintenance Squadron (CMS) Production Supers, MOS Ops Officer/Superintendent, MOF Superintendent and representatives from Pod Shop, QA and MOC.

3.8.22. Refer to AETCI 21-106, *Corrosion Control* and MXG OI 21-7 *Corrosion Control Program*.

Chapter 4

. AIRCRAFT/HELICOPTER MAINTENANCE SQUADRON (AMXS/HMXS)

4.7.1.1. Luke AFB debriefing guidance is incorporated in the following paragraphs. This supplement by no means will supersede established procedures already outlined in AFI 21-101, *Aircraft and Equipment Maintenance Management* or applicable technical data.

4.7.1.1.1. (Added) Reconcile flight times with IMDS and Graduate Training Integration Management System (GTIMS) at the end of each flying day.

4.7.1.1.2. (Added) Notify MOC of all Bird Strike incidents.

4.7.1.1.3. (Added) Ensure debriefed discrepancies and sorties are loaded into Integrated Maintenance Data System (IMDS) as soon as possible after the last flight of the day. Only during extenuating circumstances (i.e., IMDS is down) will the debrief information not be loaded the same day.

4.7.1.1.4. (Added) Ensure all off-station fuels purchases are documented on AF IMT 664 and reported to the wing refuel document control officer (WRDCO) at least weekly. This includes air refueling and fuels purchases made by Luke aircraft in transient status (IAW *DoDM 4140.25-M, Vol. II*).

4.7.1.1.5. (Added) Ensure the Aviation Into-plane Reimbursement Card (AIR Card) and/or DD Form 1896, "Jet Fuel Identiplate" are maintained with the aircraft forms.

4.7.2.1. (Added) Implement the following mandatory checklists when required: Physiological Incident Checklist (Attachment 28), Engine Debrief Checklist (Attachment 29), Main Fuel Shutoff Valve (MFSOV) Questionnaire (Attachment 30), EPU Activation Checklist (Attachment

31), Tire Failure Incident Checklist (Attachment 32), Luke AFB form 88, *56FW Dropped Object Worksheet* when required, Brake/Antiskid Failure Checklist (Attachment 33), Electrical Brownout Checklist, IAW 1F-16-2-24FI-0-1, Table 1-20.

4.7.6.1. Upon identifying a discrepancy as a repeat or recur, AMU debrief section will create a red dash write-up in the aircraft AFTO Forms 781A, **Maintenance Discrepancy and Work Document**, and in IMDS for a 7-level review of repeat/recur discrepancy.

Table 4.3. ADDITIONAL DEVIATION CAUSE CODES

4.8.3.3. MXG/CC has opted to establish a Dedicated Crew Chief (DCC) program IAW the guidance provided in AFI 21-101 and this supplement.

4.8.3.3.1. (Added) Aircraft Maintenance Units will:

4.8.3.3.1.1. (Added) Ensure applicable IMDS screen is used to assign DCC and assistant dedicated crew chiefs (ADCC) to squadron aircraft.

4.8.3.3.1.2. (Added) Ensure personnel have a minimum rank of Staff Sergeant (SSgt), unless waived per paragraph 4.8.3.4.1, and have completed the DCC course (course code 032353) within 180 days of assignment as a DCC. *NOTE:* Individuals who have completed a DCC course at a previous base of assignment will be exempt from attending course 032353 as long as training can be verified.

4.8.3.3.1.3. (Added) Monitor qualifications of personnel and track course status for work center required training by using applicable IMDS screens.

4.8.3.3.1.4. (Added) Ensure appropriate representation at Maintenance Training Flight's annual Curriculum Advisory Committee (CAC) meeting to validate DCC course material. CAC representative will possess a 7-skill level or higher.

4.8.3.3.1.5. (Added) Validate advanced crew chief training via annual course review hosted by 372d Training Squadron, Detachment 12. (Detachment 12 will develop and maintain course syllabi, tests, and conduct the course as required.)

4.8.3.4. (Added) DCC Waivers:

4.8.3.4.1. (Added) Waivers will only be granted to Senior Airmen based on performance, experience, and potential. Squadrons submit waiver through the MXG/CC.

4.10.1.32. (Added) Responsible for Storage, Transportation, Handling, Accountability, and Control of Impulse Cartridges:

4.10.1.32.1. (Added) The weapons section chief will ensure equipment requirements for cart lockers are met: Grounded metal cabinet/locker that provides adequate security and protection from the elements. Cabinet/locker will have a suitable ground slap bar/grounding point to allow dissipation of static electricity prior to handling impulse cartridges. Suitable metal containers with provisions to prevent explosive item-to-item contact will be used for transporting impulse cartridges to and from the job site.

4.10.1.32.2. (Added) Perform quarterly visual inspections and 24-month continuity checks on impulse cartridge storage lockers IAW AFI 32-1065, *Grounding Systems*, Table 1, items 11 a-d, and 12 c-f.

4.10.1.32.3. (Added) Each AMU storage facility is designated by the AF Form 2047 Explosive Facility License. The responsible weapons section chief or designee will coordinate storage cabinet/locker movement with the wing weapons safety office and notify the fire department whenever the explosive storage cabinet/locker is relocated.

4.10.1.32.4. (Added) Sequence of Operations:

4.10.1.32.4.1. (Added) Control access to the cartridge cabinet/locker. A key sign-out log or automated tracking system will be used to document access.

4.10.1.32.4.2. (Added) Weapons section chief/ expediter is responsible for the impulse cartridge inventory. A cartridge control log will be kept within the cartridge cabinet/locker (the control log may be any locally developed product). Weapons supervisors authorized access to the cabinet/locker will perform a complete inventory and sign the cartridge control log at the end of each shift.

4.10.1.32.4.3. (Added) AMUs assigned transient alert duty will ensure cartridges removed from transient aircraft are stored together (taped or in a small container), marked with aircraft tail number, and kept separately in the cartridge cabinet/locker.

4.10.1.32.4.4. (Added) Ensure these cartridges are returned to the transient aircraft unless determined to be unserviceable during the pre-use inspection. Coordinate replacement of cartridges and unserviceable cartridge turn-in through munitions operations. Do not substitute cartridges from the AMU account without prior coordination/approval from the 56th EMS Munitions Flight.

4.10.1.32.4.5. (Added) Ensure load crews accurately inventory and keep positive control of explosive assets assigned to them at all times. To ensure accurate quantity and type of impulse cartridges utilized in bomb racks, ejector racks, and fuel pylons, the person responsible for impulse cartridge installation and the individual in charge of the explosive operation will confirm/concur the correct quantity and type of impulse cartridges were installed.

4.10.1.32.5. (Added) Safety Precautions:

4.10.1.32.5.1. (Added) The responsible weapons section chief or designee will ensure technicians maintain personnel limits to: 1 supervisor, 2 workers, and 2 casuals.

4.10.1.32.5.2. (Added) Transportation is limited to/from flight line, aircraft generation area, emergency aircraft parking areas, transient aircraft ramp, or munitions storage area. Only transport the amount required for daily mission support on the flight line. Limit personnel to the number of seats available in vehicle.

4.10.1.32.5.3. (Added) Personnel will touch a grounding point before handling impulse cartridges and at frequent intervals while working to discharge any spark potential.

4.10.1.32.5.4. (Added) Serviceable cartridges will be kept separated from unserviceable cartridges during storage and transportation.

4.10.1.32.5.5. (Added) Fire symbol "4" signs will be posted on the outside of cabinet/lockers located inside buildings that are exempt from "quantity-distance" IAW AFMAN 91-201, *Explosives Safety Standards*.

4.10.1.32.5.6. (Added) Cartridges and containers will be safely secured during transportation. Container will be marked appropriately to identify its contents. Containers with impulse

cartridges left unattended on the flight line will be secured to prevent unauthorized access or removal.

4.10.1.32.5.7. (Added) Vehicles containing impulse cartridges will not be left unattended unless parked in a properly designated area (i.e., flight line, weapons storage area, holding yard, or ready munitions area). Vehicles will not be utilized to store impulse cartridges.

4.10.1.32.5.8. (Added) Impulse cartridges (and other explosives) will not be transported in pickup trucks that have plastic bed liners installed unless the cartridges are in their original sealed container. *NOTE:* This does not apply to spray-in bed liners.

4.10.1.32.5.9. (Added) Explosives may be transported in metro vans/ golf cart type vehicles provided all safety requirements outlined in AFMAN 91-201 are met.

4.10.1.32.5.10. (Added) Live impulse carts will be transported in a red metal can labeled "LIVE IMPULSE CARTS". A suitable can is equivalent to a red, .30- or .50-caliber ammunition can with wood or foam separators.

4.10.1.32.5.11. (Added) Expended cartridges will be temporarily transported/stored in a closed metal ammunition can labeled, "EXPENDED IMPULSE CARTS", until turned in to EMS Munitions Flight personnel at the end of the flying day. Any color 20MM ammunition can, other than red (or equivalent) is suitable. When used to transport expended cartridges, the ammunition can will be secured in the cargo compartment during transport and the cargo compartment will be free of readily combustible materials.

4.10.1.32.5.12. (Added) Live or expended impulse carts will not be stored inside an office (non-industrial) environment under any circumstances.

4.10.1.32.5.13. (Added) Suspect impulse cartridge(s) involved in hung munitions incidents will be transported to the munitions storage area (if applicable). Suspect impulse cartridges will be tagged with aircraft tail number, type suspension equipment and serial number, position of station involved, and cartridge lot number. Call EMS Munitions Control Element for immediate pick-up of confirmed suspect impulse cartridges. If suspect impulse cartridge(s) are being held pending other bad actor troubleshooting or cannot be immediately transported to the munitions storage area, keep segregated in the cartridge cabinet/locker pending troubleshooting completion. Suspect cartridges will not be reused for troubleshooting purposes

4.10.1.32.6. (Added) Suspect/Misfire/damaged/Over-G Rocket/Cap-9/Acceleration Monitoring Assemblies (AMA) Procedures:

4.10.1.32.6.1. (Added) All suspect misfire rockets will be downloaded from aircraft by weapons load crew personnel. The load crew will place a black X, launcher number, and aircraft tail number on the side of the rocket motor with permanent ink. Suspect 2.75-inch rockets will be given back to the Line Delivery Crew Member. **WARNING:** Under no conditions will a rocket marked with two black Xs be loaded and attempted to fire a third time.

4.10.1.32.6.2. (Added) If a rocket is returned to service and fails to fire on the second attempt, the load crew will mark with a second black X and tag suspect rockets with an AFTO Form 350. The tag will contain the following information: The tag will indicate the discrepancy and will contain the following information: Rank/Name, launcher number, aircraft tail number, and date flown.

4.10.1.32.6.3. (Added) Rocket(s) with damaged or missing “foil” end shields is not reason for rejection. However, at the end of the flying day the rocket(s) will be downloaded from the aircraft by weapons loading personnel and returned to AMMO for repair. Each rocket will be properly tagged with an AFTO Form 350. The tag will indicate the discrepancy and will contain the following information: Rank/Name, aircraft tail number, and date flown.

4.10.1.32.6.4. (Added) Rockets with a torn or punctured weather seal will be downloaded from the aircraft by weapons loading personnel as soon as the discrepancy is discovered and properly tagged with an AFTO Form 350. The tag will indicate the discrepancy and will contain the following information: Rank/Name, aircraft tail number, and date flown.

4.10.1.32.6.5. (Added) AMU Weapons Expeditors will notify munitions control of all installed CAP-9 missiles and AMD pods on confirmed Over-G aircraft. Document Over-G condition on a 350 Tag and remove installed munitions for pick-up and delivery to PGM for inspection and tracking.

4.12.3. Ensure Dash-21 Equipment control and accountability

4.12.3.1. (Added) Aircraft ladders will have a properly filled out AFTO Form 244, Industrial/Support Equipment Record, attached. An operator’s prior to use inspection will be performed but documentation of the inspection is not authorized in section II.

4.12.3.2. (Added) Aircraft ladder inspection intervals will be conducted IAW TO 00-20-1, AETC Supplement and documented on AFTO Form 244 section III. Tracking of next due and completion dates may be tracked in TAS.

4.12.3.3. (Added) Each external fuel tank (EFT) hardware kit will have an identification number assigned IAW AFI 21-101, paragraph 10.5. The only items inside the kit that must be marked or etched are 3 each external tank pins.

4.12.3.4. (Added) Each set of Dash-21 equipment will be marked with the standard nine-digit Equipment Identification Designator (EID). Dash-21 equipment assigned to an aircraft should be identified by the AMU’s TAS four-digit alphanumeric prefix and tail number (Example: LY7AA9056 or LY7A92056 for aircraft 89-2056). Gun hold back tool will be etched with the serial number of the gun unit. Gun electrical safety pin will be marked to the assigned aircraft. Chaff/flare safety pin will be assigned to the owning unit. All other Alternate Mission Equipment (AME) pins do not require markings. All weapons related pins will have streamers with a minimum length of 8 inches, maximum length of 12 inches.

4.12.3.5. (Added) 21st and 425th AMU weapons AME safety pins will have identifying markings as to which AMU they belong to.

4.12.3.6. (Added) Inventory of Dash-21 Equipment

4.12.3.6.1. (Added) Each EFT hardware set will be assigned to an aircraft and will be inspected semi-annually.

4.12.3.6.2. (Added) Each Dash-21 equipment set will be assigned to an aircraft and will be inspected semi-annually.

4.12.3.6.3. (Added) Spare operational sets of Dash-21 equipment, such as temporary duty (TDY) sets, will be assigned an identification number. Spare operational sets will be inspected

semi-annually by the Dash-21 Program Manager. Operating stock needed for Dash-21 equipment may be maintained.

Chapter 5

. MAINTENANCE SQUADRON

5.5.4.5. (Added) Anywhere a hydrazine leak or EPU activation occurs will temporarily become a hydrazine maintenance area. Emergency procedures will be followed and the tank depressurized. If no leaks or residual hydrazine are present and fuels personnel determine the aircraft is safe for personnel, the on-scene commander may direct the aircraft be towed to a designated hydrazine maintenance area for purging. Under no circumstances will other maintenance (including munitions download) be authorized unless the on-scene commander directs it based on emergency issues (imminent equipment damage, personal injury, etc.).

5.5.4.5.1. (Added) Designated hydrazine maintenance areas include: Building 968 and spots 4 through 9 in front of building 968, building 984 and spots 3 and 4 in front of building 984, Echo ramp, and Taxiway F (alternate) spots 1 and 2 for aircraft. NOTE: Echo ramp and Taxiway F spots 1 and 2 are the only locations for aircraft with any type of munitions.

5.5.4.6. (Added) EPU Monopropellant Tester Management:

5.5.4.6.1. (Added) AMU and Phase will turn EPU tester into fuels support section (building 968) after each use for contamination check. If contamination is discovered, tester must be purged by Aircraft Fuels System Specialist. Fuels will document a 350 Tag confirming that the tester has been checked and/or purged, and no contamination is present.

5.5.4.6.2. (Added) The individual who used the tester must place a red X in the AFTO Form 244, Industrial/Support Equipment Record, and annotate date and aircraft tail number the tester was last used on.

5.5.4.7. (Added) Main/alternate fuel system hangar/open fuel system repair areas

5.5.4.7.1. (Added) The main fuel system repair hangar is building 968. The maximum number of aircraft undergoing fuel system or hydrazine maintenance in the hangar is three (spots 1, 2, and 3), and the outside open fuel system repair area is four (spots 4 through 7). Additional spots have been authorized for hydrazine maintenance in front of building 968 (spots 8 and 9). Hydrazine maintenance, refueling, defueling, and troubleshooting (with or without power) are authorized in spots 4 through 9 provided no other maintenance is being performed in the area.

5.5.4.7.2. (Added) The alternate fuel system repair hangar is building 984 and is used in the event building 968 is full, or for special tasks. The maximum number of aircraft undergoing fuel system maintenance in the hangar is two (spots 1 and 2). Additional spots have been authorized for hydrazine maintenance in front of building 984 (spots 3 and 4). Prior to and during hydrazine maintenance, the adjacent road will be blocked with ropes or cones to maintain proper distance. The hangar doors shall remain closed during any of the aforementioned maintenance activities.

5.5.4.8. (Added) Prior to aircraft movement into the fuel system hangar or repair area, the AMU or Phase will:

- 5.5.4.8.1. (Added) Ensure the aircraft fuel load is configured as required.
- 5.5.4.8.2. (Added) Defuel and pressure drain (if applicable) all affected tanks.
- 5.5.4.8.3. (Added) Remove liquid oxygen bottle, deplete the emergency power unit nitrogen tank, and safe all egress components and explosive materials.
- 5.5.4.8.4. (Added) Remove all ammunition, external tanks/stores, and pylons (when applicable).
- 5.5.4.9. (Added) The following flightline fuel system maintenance is authorized: installing/removing plexiglass observation panels, dry motoring operational/ leak checks and tightening of any associated lines discovered leaking during operational/leak checks (to be performed by fuels (2A6X4) personnel). Maintenance will be performed in accordance with TO 1-1-3 and applicable aircraft specific TOs.
 - 5.5.4.9.1. (Added) Approved flightline fuel system maintenance will only be performed on spots 2 thru 5 on row 17 and 18. A 50 foot roped or coned perimeter must be clearly identified as a fuel system maintenance area with the appropriate sign(s).
 - 5.5.4.9.2. (Added) No other maintenance is to be performed on the aircraft during fuel system maintenance unless authorized by fuel shop.
 - 5.5.4.9.3. (Added) No aircraft or AGE will be running/taxiing within 100 feet to the left and right or front and rear of open fuel cell source.
 - 5.5.4.9.4. (Added) Proper fuel configuration will be met and/or applicable external fuel tanks will be defueled.
 - 5.5.4.9.5. (Added) Once maintenance is complete, immediately install the permanent panel to perform the necessary follow-on maintenance
- 5.5.4.10. (Added) AMU Plans, Scheduling, and Documentation (PS&D) will schedule installed EFTs that are due for inspection (maximum of 16 per week) during the weekly shared resource meeting.
 - 5.5.4.10.1. (Added) Ensure assets that are deploying have sufficient time remaining on the 12 month inspection to preclude off-station grounding.
- 5.6.6. The AMU will maintain parking areas positioned along the barriers on the flight line. They will police the area and notify their AGE driver when equipment requires pickup or attention. The only ready lines are at the AGE flight, and those designated for bomb lifts, all other areas are sub pools.
 - 5.6.6.1. (Added) All AGE deploying from Luke AFB must be requested through 56 EMS/56 CMS. AGE Flight will process all 56 EMS assets and for liquid oxygen (LOX), gaseous oxygen (GOX), Liquid Nitrogen, Gaseous Nitrogen (8 Bottle Nitrogen Carts) coordinate deployment through CMS Electro Environmental Section.
 - 5.6.6.2. (Added) When ground servicing equipment is utilized to perform aircraft servicing (i.e., engine oil, hydraulics, LOX, GOX, and fuel), the AF Form 3136, Oil/Hydraulic Cart Servicing Log; AFTO Form 134, Aviators Breathing Oxygen Servicing Trailer Log as applicable, will be documented. When the equipment servicing log becomes full, leave it in the forms storage pouch, obtain a blank form, complete the heading, and begin using the new form.

5.6.7.1. (Added) AGE will not be backed with a vehicle at any time. AGE requiring repositioning will be pushed manually using the adequate number of personnel to prevent injury or damage to aircraft and equipment.

5.6.7.2. (Added) Vehicles will never be operated and AGE will not be towed within 10 feet of any portion of an aircraft, into hangars, or under aircraft sunshades when aircraft are present. Exceptions: Tow vehicles for the purpose of towing, emergency vehicles, equipment engaged in emergency or recovery operations and weapons loading equipment (Jammers) performing weapons functions on that aircraft.

5.6.7.3. (Added) AGE will never be connected to a vehicle and an aircraft simultaneously.

5.6.7.4. (Added) Golf Carts not rated for high load capacity will not be used to tow AGE. Exception: Golf carts equipped with proper towing apparatus may be used to tow a FOD Boss or FOD sweeper.

5.6.7.5. (Added) Movement of engines while on removal & install (R&I) trailers will be kept to a minimum. Engines will not be transported over long distances or over rough surfaces while installed on R&I trailers. R&I trailers may be used to transport engines over short distances as long as the conditions for securing the engine to the trailer are met IAW TO 1F-16()-2-70JG and the trailer is manually pushed/pulled to the new location. R&I trailers will not be used to transport engines to/from back shops (i.e., engine back shops) or on/off the flight line, exception, transporting to/from flight line to/from aircraft maintenance hangars is allowed.

5.7.3.17. The OI has been incorporated in this Supplement.

5.7.3.17.1. (Added) Responsibilities: Armament Flight Commanders, Flight Chiefs, Section Chiefs, and Supervisors will ensure compliance with this Supplement for in-Shop handling and maintenance of jammed or broken, gun systems, and ammunition handling systems.

5.7.3.17. 2. (Added) General Safety Precautions: The explosive limits for building 920 are as follows: 20mm target practice (TP)/target practice tracer (TPT) ammunition as reflected on AF Form 2047, Explosive facility license. High Explosive Incendiary (HEI) ammunition (class/division (04) 1.2.2) is not permitted. Each gun/ Universal Ammunition Loading System (UALS)/Ammunition Loading System (ALS) will be checked to make sure it is safe before being stored in building 920. Guns, drums, and storage containers containing ammunition will be grounded. Prior to handling any 20mm ammunition, and at frequent intervals during handling, each person will touch a grounding device to discharge any static electricity potential. Storage area will be kept clean and free of obstructions.

5.7.3.17.2.1. (Added) Post appropriate fire symbols and notify base Fire Department and Maintenance Operations Center (MOC) of any fire symbol changes. Ensure two fire extinguishers (2A:10BC) are readily available during all operations.

5.7.3.17.3. (Added) Personnel Limits: Personnel limits apply only to the direct work areas involved in the operations as established by this supplement. It is not intended to limit the number of personnel in the building during ammunition storage.

5.7.3.17.3.1. (Added) Personnel limits are as follows: Supervisors: Minimum of one, maximum of three; Workers: Minimum of one, maximum of four; Casuals: Maximum of two. A minimum of two personnel will be present when hoisting or transporting the ALS/UALS drum

or LALS container. During any operation involving live ammunition one supervisor and one technician will be present.

5.7.3.17.4. (Added) Sequence of Operations:

5.7.3.17.4.1. (Added) All items containing 20mm ammunition will be grounded. Personnel will ground themselves prior to handling ammunition and frequently throughout the operation.

5.7.3.17.4.2. (Added) Disassemble handling system to the extent necessary to remove live ammunition using procedures in the appropriate technical data.

5.7.3.17.4.3. (Added) All ammunition will be removed and placed in ammunition containers and turned in to the Munitions Flight IAW procedures outlined in LUKEAFBI 21-601, *Control, Accountability, and Reconciliation of Munitions*.

5.7.3.17.4.4. (Added) Expended 20mm cartridge cases will be separated from live rounds and turned in to the Munitions Flight. *NOTE:* If live rounds are in a gun or ALS/UALS/LALS, remove them as soon as possible. As a last resort HC/D 1.4 20mm ammunition may be stored overnight in building 920 in a grounded ALS/UALS/LALS or in sealed and grounded ammunition containers. 20mm HEI HC/D (04) 1.2.2 is not permitted in building 920.

5.7.3.17.5. (Added) Emergency procedures:

5.7.3.17.5.1. (Added) Supervisors will brief all personnel and visitors on emergency procedures to follow and agencies to be notified if a mishap or fire occurs. The pre-task briefing and emergency procedures check sheet (Attachment 1) will be filled out prior to starting any maintenance or clearing operations on ALS/UALS/LALS containing ammunition.

5.7.3.17.5.2. (Added) In the event of fire involving 20mm ammunition, the senior ranking person will notify MOC (ext. 5461/5469), the Base Fire Department (ext. 911), and Weapons Safety (ext. 6675) of the type and location of munitions involved.

5.7.3.17.5.3. (Added) Evacuate non-essential personnel to 300 feet. Personnel shall reassemble in the parking lot due south of the flight line dining facility. Direct personnel in controlling the fire, using available firefighting equipment. If fire engulfs explosives or is so large that it cannot be extinguished with the equipment on hand, personnel will evacuate the facility and report the status of the fire to the first responding fire fighter. All munitions not engulfed in flames will be removed from the area, if possible.

5.7.3.17.5.4. (Added) In the event of a hazardous condition involving 20mm ammunition; Munitions Control (ext. 6040) and Explosive Ordnance Disposal (EOD) personnel (ext. 6428) will be notified. During severe weather the applicable procedures outlined in the wing emergency action checklist will be followed. During periods of lightning within 5 miles of Luke AFB all explosive operations will cease.

5.7.5.1. 56th Equipment Maintenance Squadron Armament Flight will:

5.7.5.1.1. (Added) Account for all Alternate Mission Equipment, attaching hardware, and associated safety gear. 21st and 425th AMUs will account for their own attaching hardware and safety gear.

5.7.5.1.2. (Added) Sign in/out all equipment from storage facility in building 926 using AME sign in/out log and the automated equipment tracking program. All attaching hardware and safety gear will be inventoried and accounted for during AME sign in/out.

5.7.5.1.3. (Added) Advise AMU Weapons Section(s) of changes to weekly/monthly maintenance schedule.

5.7.5.2. (Added) AMU Weapons Expeditors will:

5.7.5.2.1. (Added) Ensure Underwing Adapters (UWA) and Centerline Pylons (CLP) turned into Armament Flight have the attaching hardware stored in a screw bag affixed to the outside of the equipment. Wing Weapons Pylons (WWP) will be turned in with the attaching hardware stored in the pouch behind the pylon access panel.

5.7.5.2.2. (Added) Ensure SUU-20 bomb dispensers and Triple Ejector Racks (TER) turned into Armament Flight have serially mated cables attached. SUU-20s and TERs with cables on order will have a document number and a maintenance snapshot inquiry (IMDS screen #122) printout attached to the AFTO Form 350 verifying status before the equipment is turned in to AME.

5.7.5.2.3. (Added) Ensure equipment is turned in to the AME Section (Bldg. 926) for scheduled maintenance no later than close of business, on the last duty day of the week, prior to the scheduled inspection due date.

5.7.5.2.4. (Added) Deliver all in-flight malfunction AME directly to the Armament Flight after aircraft landing/malfunction discovery. An AFTO Form 350 and an IMDS screen #122 printout will be attached.

5.7.5.2.5. (Added) Forward a letter (electronic or paper) to the Armament Flight Production Supervisor identifying TDY/deployed equipment by type, quantity, and serial number. Notify Armament Flight when all TDY/deployed assets have returned, except assets not owned by the US Air Force.

5.7.5.2.6. (Added) Notify Armament Flight Production Supervisor when aircraft transfer out with AME installed.

5.8.5.9.1. (Added) The Avionics section will review the history of any line replaceable unit (LRU) requiring bench-check or repair and determine if the unit is a "bad actor." "Bad Actor" LRUs are units that have failed on at least two different aircraft for the same or similar malfunctions three times in a 6-month period.

5.8.5.9.2. (Added) LRUs still under manufacturer or depot warranty will not be worked by field level maintenance. They will be turned in for repair under the warranty.

5.8.5.9.3. (Added) "Bad Actors" are reported to the appropriate Air Logistics Center as a deficiency report.

5.8.5.9.4. (Added) Notify the appropriate AMU Pro Super/Section Chief when an LRU has been determined to be a "bad actor". AIS personnel will initiate/complete deficiency report and hold LRU as exhibit until disposition instructions have been received from product improvement personnel.

5.10.6.11.3. Control impulse cartridges removed from transient aircraft IAW Chapter 4 and 12 of this instruction.

5.12.1.9.1. (Added) Home station engine-to-aircraft cannibalizations:

5.12.1.9.1.1. (Added) Upon receipt of cannibalization request from AMU, the Propulsion flight Cannibalization Authority (CA) will determine the engine to cannibalization (CANN) requested part from. Ensure item is serviceable and verify with Engine Management Branch (EMB) that there is sufficient time remaining if applicable.

5.12.1.9.1.2. (Added) AMU personnel will order required part/component and provide required information to Jet Engine Intermediate Maintenance (JEIM) before CANN action can be approved.

5.12.1.9.1.3. (Added) AMU personnel will create the cannibalization job in IMDS and provide JEIM documentation of the CANN document number utilizing IMDS screen 83. The "Marked For" will be the engine that the cannibalized item will be removed from, the backorder status is mission capable (MICAP), and the delivery destination is building 931.

5.12.1.9.1.4. (Added) The AMU will turn the unserviceable due-in from maintenance (DIFM) asset into supply. Once the AMU supply section receives the MICAP Due-out(s) from LRS, the assets will be promptly brought to the Propulsion flight so the MICAP boards can be cleared and the part is returned to the cann'd engine.

5.12.1.9.1.5. (Added) When the part is removed from the engine ensure the T and U action taken code are used in IMDS.

5.12.1.9.1.6. (Added) JEIM section will ensure all fittings, rod ends, etc are removed from canned part or the AMU provides those parts to JEIM at the time of part issuance. A hand receipt may function to ensure part accountability pending the AMU returning attaching parts.

5.12.1.9.1.7. (Added) JEIM personnel will document engine work package and the Propulsion flight CANN log annotating CANN action details.

5.12.1.9.2. (Added) Deployed engine-to-aircraft cannibalizations:

5.12.1.9.2.1. (Added) The same home station engine-to-aircraft cannibalizations steps will be used as outlined above when the CANN involves in-shop assets.

5.12.1.9.2.2. (Added) CANN actions that involve cannibalizing from a deployed engine will be limited as a last case option and MUST BE APPROVED by the CA AUTHORITY and coordinated with the Luke AFB Propulsion Flight prior to cannibalization.

5.12.1.9.3. (Added) Propulsion Flight Cannibalization Procedures for Serially Tracked Parts/Components between Uninstalled Engines: Note: Swapping modules between uninstalled engines to align module time remaining is not considered a cannibalization action.

5.12.1.9.3.1. (Added) The CA will determine engine to CANN requested part from. Ensure item is serviceable and verify with EM that there is sufficient time remaining if applicable.

5.12.1.9.3.2. (Added) Gaining JEIM crew chief will provide documentation indicating a CANN document number utilizing IMDS screen 83 with "Marked For" to engine that the cannibalized item will be removed from, the backorder status is MICAP.

5.12.1.9.3.3. (Added) When the serially controlled part has to be physically removed from the engine ensure T and U action taken codes are used in IMDS.

5.12.1.9.3.4. (Added) Gaining JEIM crew will turn the DIFM asset into supply.

5.12.1.9.3.5. (Added) Ensure all fittings, rod ends, etc are removed from canned part or that the gaining crew provides those parts to losing crew at the time of part issuance.

5.12.1.9.3.6. (Added) Document engine work package annotating CANN action details.

Chapter 6

. MAINTENANCE OPERATIONS SQUADRON

6.2.3.19.10.1. (Added) AMU will coordinate through vehicle control officer (VCO) or group level VCO to request flat bed air ride trailer from vehicle operations control center (VOCC). After engine change AMU will properly prepare and coordinate return of unserviceable engine to home station.

6.2.3.19.10.2. (Added) JEIM will deliver serviceable engine to TMO and pickup unserviceable engine from TMO upon its return.

6.2.6.10.1.1. (Added) Work center codes are established in IMDS per TO 00-20-2.

6.2.6.10.1.2. (Added) Additions, deletions, or changes to IMDS work center codes must be coordinated through maintenance group manning (56 MOS/MXOPM), maintenance data systems analysis (56 MOS/MXOOA), and approved by the Maintenance Group Commander.

6.2.6.16.4.8.2. The OI has been incorporated in this Supplement.

6.2.6.16.4.8.2.1. (Added) Use manual job control number (JCN)s (Attachment 34) only when IMDS is down. Transient Alert may use manual EIDs for all transient aircraft.

6.2.6.16.4.8.2.2. (Added) Unit schedulers will assign manual EIDs for time change items, Time Compliance Technical Orders, One-Time Inspections, and special inspections on assigned aircraft.

6.2.6.16.4.8.2.3. (Added) Debrief will assign manual EIDs for any jobs called in during aircrew preflight.

6.2.6.16.4.8.2.4. (Added) Schedulers will assign manual EIDs for assigned shop equipment.

6.2.6.16.4.8.2.6. (Added) Upon notification of extended downtime (24 hours) or computer failure, cease all computer processing. Database Management (DBM) will coordinate with the Subsystem Managers, tenant unit DBM, and Oklahoma City Defense Enterprise Computing Center (DECC).

6.2.6.16.4.8.2.6.

1. (Added) All IMDS users must:

6.2.6.16.4.8.2.6.

1.1. (Added) Annotate their most current IMDS products until all updates are processed and a new product can be furnished by DBM section.

6.2.6.16.4.8.2.6.

1.2. (Added) Determine what minimum background products are needed to accomplish their mission and the frequency of processing.

6.2.6.16.4.8.2.6.

2. (Added) The DBM section will:

6.2.6.16.4.8.2.6.

2.1. (Added) Advise the OG and MXG commanders and their respective staffs on system status.

6.2.6.16.4.8.2.6.

2.2. (Added) Coordinate all IMDS related processing with Oklahoma City DECC and other IMDS users on priority and frequency of processing.

6.2.6.16.4.8.2.6.

2.3. (Added) Utilize the following data input priority list whenever IMDS is down for an extended period of time.

6.2.6.16.4.8.2.6.

2.3.1. (Added) Debriefing, MOC, PS&D, Engine Tracking, then all others.

Chapter 7

. MAINTENANCE PLANS, SCHEDULING AND DOCUMENTATION (PS&D)

7.1. Refer to LUKEAFBI 21-123, *Standardization of Core Scheduling Practices*.

7.2.5.5. (Added) Nonconforming Technical Assistance Request and Reply (107-T) must be submitted via the Air Force Material Command (AFMC) F-16 Structural Repair Site.

7.2.5.6. (Added) MOF/PS&D will act as FW point of contact for all 107-M requests.

7.2.5.7. (Added) Unit/work centers requesting a 107-M will fill out and route the Request for Depot Assistance Worksheet (Attachment 27). All applicable coordinating authorities and all approving authorities require wet ink signature concurrence (digital signatures are acceptable if routing electronically). Once completed, the worksheet will be returned to MOF PS&D for submittal.

7.2.5.8. (Added) QA will review the 107-M request to ensure technical accuracy, ensure all local repair resources have been exhausted, and record concurrence/non-concurrence on Request for Depot Assistance Worksheet.

7.2.6.1. EM manages engine and engine equipment related TCTOs.

7.8.2. AMU PS&D will produce and deliver a reproducible or electronic copy of their portion of the weekly utilization and maintenance schedule to MOF PS&D by 1200 on Thursday of the week preceding the effective week.

7.8.3.1.1. (Added) All scheduled sorties originating from Luke AFB will use "home station" sortie numbers with the exception of FCF/OCF and Adds.

7.8.3.1.2. (Added) Sorties launched from a geographically separated location (Examples: RED FLAG or MAPLE FLAG) with full 56th Fighter Wing maintenance support will use “deployed” sortie numbers.

7.8.3.1.3. (Added) All sorties added to the local schedule will use “add” sortie numbers. These sortie sequence numbers will be used for both chargeable and non-chargeable adds.

7.8.3.1.4. (Added) All sorties launched from locations other than Luke AFB are “off-station” sorties with the exception of deployed sorties IAW paragraph 7.8.3.1.2.

7.8.3.1.5. (Added) AMUs are assigned sortie sequence numbers IAW following Table:

Table 7.8. 3.1.5. (Added) Assigned Sortie Sequence Numbers.

Unit	Home Station	Deployed (See Para 7.9.3.11.2.)	Add (Home Station)	Off-Station	FCF/OCF
21 AMU	001-040	041-060	061-080	081-095	096-100
Reserved	101-140	141-160	161-180	181-195	196-200
310 AMU	201-240	241-260	261-280	281-295	296-300
308 AMU	301-340	341-360	361-380	381-395	396-400
425 AMU	501-540	541-560	561-580	581-595	596-600
Reserved	601-640	641-660	661-680	681-695	696-700
309 AMU	701-740	741-760	761-780	781-795	796-800
62 AMU	801-840	841-860	861-880	881-895	896-900

7.10.7.2.3. For OI guidance to ensure proper use, control, and documentation of locally developed profile job flow packages, forms, and lists refer to Chapter 8 of this instruction.

Chapter 8

. QUALITY ASSURANCE

8.3.4.1. (Added) Maintain a master copy and perform 50 percent review annually of all local forms, lists, preprints, and profile-type job standard (JST's) allowing 100 percent review every 2 years.

8.3.4.2. (Added) The 21 AMU and 425 AMU are authorized to use manual preprinted AFTO Forms 781A, and will maintain no more than a 3-month supply of preprinted forms. To effectively control the use of preprinted manual AFTO Forms 781A, all authorized units will download preprints via the Local Area Network on an "as needed" basis.

8.3.4.3. (Added) Units within the MXG will submit additions or deletions to local forms, lists, preprints, and profile-type job flow packages through their section chiefs and supervision to be reviewed for accuracy, intent, and necessity. After review, coordinate with 56 MXG QA for final approval (21 AMU local forms, lists, preprints, and profile-type job flow packages will be coordinated through 21 AMU Quality Assurance). For profile-type job flow packages,

submission will be as stated, with additional coordination through unit Plans and Scheduling (P&S) to perform the requested actions in IMDS. After actions are completed in IMDS, P&S will notify 56 MXG QA (21 AMU Contracting Officer Representative COR as applicable) of completion.

8.3.4.4. (Added) Review meetings should include the applicable unit's subject matter experts. Changes and attendees will be documented and maintained until the next review. MXG/QA OIC/SUPT will have final approval of all changes to JST's.

8.3.4.5. (Added) Assign individual control numbers to each approved form, list, and preprint. Ensure the current date and QA stamp (ink or approved digital) is placed on each odd numbered page.

8.3.4.6. (Added) Under unique circumstances or extensive repair conditions, additional inspection requirements may be needed to ascertain adequacy of repair and quality of depot/contractor activities. If these conditions arise, the 56 MXG Quality Assurance section will develop and publish additional acceptance/transfer inspection activities/criteria on a case by case basis.

8.4.10. The master forms binders for USAF, 21 AMU(s), and the 425 AMU are maintained at the QA office. All AMU(s) master forms will mirror QA's master forms. They may have additional forms as long as the aircraft forms are standardized within the unit.

8.12.2. Refer to LUKEAFBI 21-117, *Product Improvement Program*.

8.16.1.1.1. (Added) All FCF/OCF missions must have prior approval by the 56 OG/CC and 56 MXG/CC (or designated representatives).

8.16.1.1.2. (Added) All FCFs must be flown by a current and qualified FCF pilot. During B/D-model FCF missions, the rear cockpit can only be occupied by a FCF qualified pilot or an upgrading FCF pilot. OCFs will only be flown by a fully qualified instructor pilot (IP).

8.16.2.1.1. (Added) FCF OIC responsibilities:

8.16.2.1.2. (Added) Train and monitor all FCF pilots.

8.16.2.1.3. (Added) Provide the QA FCF program manager a copy of the FCF certification letter signed by the 56 OG/CC.

8.16.2.1.4. (Added) Ensure the 56 FW has the required number of current and qualified FCF pilots to meet wing requirements. The OIC will work directly with the OG/CC to fill the required positions.

8.16.2.1.4.1. (Added) With the exception of the 21 FS and the 425 FS, FCF pilots in the 56 FW will be Standardization Evaluation Flight Evaluator (SEFE)s assigned to 56 OGV. 56 OGV should have no less than 3 FCF pilots to include the FCF OIC. The 21 FS and the 425 FS will each maintain at least 1 FCF pilot and no more than 3 FCF pilots at the discretion of each FS/CC.

8.16.2.1.5. (Added) FCF Pilot Qualification Training:

8.16.2.1.5.1. (Added) Upgrading FCF pilots will:

8.16.2.1.5.1.1. (Added) Receive a comprehensive briefing from the FCF OIC on local procedures and requirements listed in the following: AFI 11-205, *Aircraft Cockpit and Formation Flight Rules*; AFI 11-202, *General Flight Rules*; AFI 11-218 and AETC Supplement

1, *Aircraft Operation and Movement on the Ground*; AFI 11-401, *Flight Management*; AFI 13-201, *Air Force Air Space Management*; AFI 21-101 and AETC Supplement 1, *Aerospace Equipment Maintenance Management*; LUKEAFBI 13-203, *Airfield Operations and Base Flying Procedures*; TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, TO 1-1-300; TO TW/SN/1F-16A/C/CM/CJ-6; TO TW/SN/1F-16A/C/CM/CJ-1, *Flight Manual*; LCL 56 MXQ-2, *High Speed Taxi Checklist*; Falcon Facts; and this OI.

8.16.2.1.5.1.2. (Added) Accomplish an open-book examination based on the references listed in the previous paragraph. A passing score is 85% corrected to 100%.

8.16.2.1.5.1.3. (Added) Complete the local FCF profile in a simulator (Unit Training Device (UTD), Weapons Tactics Trainer (WTT), Network Training Center (NTC)) with a current and qualified FCF pilot.

8.16.2.1.5.1.4. (Added) See a full FCF profile in flight from the rear cockpit. This requirement is waived for previously qualified F-16 FCF pilots.

8.16.2.1.5.1.5. (Added) Demonstrate proficiency in a complete FCF profile from the front cockpit. An actual FCF will not be used for front seat training.

8.16.2.1.5.2. (Added) FCF pilots will:

8.16.2.1.5.2.1. (Added) Meet FCF Pilot Currency Requirements, IAW TO 11-2F-16V1.

8.16.2.1.5.2.2. (Added) FCF pilots will receive FCF academics from the FCF OIC annually.

8.16.2.1.5.2.3. (Added) FCF currency will be tracked using the ARMS database.

8.16.3.1.1. (Added) Brief pilot and Top-3 on reason and corrective action for FCF. Accompany the FCF pilot on the -1 preflight inspection of the aircraft.

8.16.3.6. (Added) Conduct preflight maintenance evaluations on FCF aircraft per the Maintenance Standardization and Evaluation Program (MSEP).

8.16.3.7. (Added) Conduct a full review of the active aircraft forms, inactive aircraft forms, IMDS, and associated aircraft history (applicable to FCF and OCF aircraft).

8.16.3.8. (Added) E-mail the reason and corrective actions regarding the FCF/OCF/high speed taxi (HST) to the OG/CC and MXG/CC (or designated representatives) for approval. Approval e-mails will be printed out and attached to the QA FCF/OCF/HST checklist.

8.16.4. Aircraft FCF configuration will be clean with no external pylons (exception: a pylon may remain installed on station five). A centerline tank, an acceleration monitoring device pod, and a captive AIM-9 missile are allowed on stations 1 and 9 during FCF training missions. Configurations other than the above require OG/CC approval.

8.16.4.1. (Added) The AMU will notify/coordinate all FCF/OCF with QA FCF Manager in a timely manner to allow sufficient time to accomplish FCF/OCF requirements and to preclude any last minute delays. All maintenance actions and documentation will be completed before the QA FCF Manager requests authorization. This will consist of the following actions:

8.16.4.2. (Added) Units with IMDS will ensure an FCF/OCF job flow package is inserted in the new aircraft forms. Squadrons not utilizing job flow packages will insert an FCF/OCF preprint in the aircraft forms.

8.16.4.3. (Added) Ensure the active and pulled AFTO Form 781-series forms, copy of current IMDS 380 screen, and maintenance history report for the aircraft and engine are delivered to QA FCF Manager for review.

8.16.4.4. (Added) Notify MOC of anticipated FCF/OCF mission.

8.16.7. Aircraft located off station requiring FCF/OCF will follow host station procedures in coordination with home station OG/CC and MXG/CC.

8.18.2. (Added) QA FCF Manager will brief the FCF Pilot, and squadron Top 3 on reason and corrective action for HST, the aircraft configuration, internal fuel load, and the desired taxi check speed.

8.18.3. (Added) AMU responsibilities:

8.18.3.1. (Added) Process forms through QA FCF Manager using FCF procedures. Provide QA FCF Manager with a complete history of the problem to include the aircraft configuration, fuel on board, and speed at which the problem occurred.

8.18.3.2. (Added) Coordinate all HST checks through MOC. Prior to the operation, MOC will pass tail number, parking spot, time of taxi, and route to tower. The tower will not authorize HST checks without prior coordination with MOC.

8.18.3.3. (Added) Follow the procedures outlined in the local checklist (LCL) 56 MXQ-2 and applicable -1, -1CL, and -1-1 TOs.

8.18.4. (Added) FCF pilot responsibilities:

8.18.4.1. (Added) Follow the procedures outlined in the LCL 56 MXQ-2 and applicable -1, -1CL, and -1-1 TOs.

8.18.4.2. (Added) Prior to taxi, inform arming crew of FCF sortie for arming priority.

8.18.4.2.1. (Added) Taxi through arm/dearm.

8.18.4.3. (Added) FCF/OCF/HST Procedures from Gila Bend (location code GBN):

8.18.4.4. (Added) Follow home station procedures with the following special instructions for pilots performing FCFs:

8.18.4.5. (Added) Coordinate for Sells AB airspace (above FL200) and Sells CDE airspace (above FL390). Contact Airspace Management (ext 5855) to coordinate the required communication between Gila Bend (GBN) Tower, Luke Radar Approach Control (RAPCON), and Albuquerque (ABQ) Center before stepping. This will ensure ABQ Center clearance for the MAX climb will be relayed to you via GBN tower.

8.18.4.6. (Added) Contact ABQ Center (local channel 6) for your Instrument Flight Rule (IFR) clearance before climbing above FL180. Perform standard FCF checks within range airspace and begin the Mach run after established on the 170 radial outbound from GBN Tactical Air Navigation (TACAN).

8.18.5. (Added) Transient alert will contact QA FCF Manager if an FCF for transient aircraft is required.

8.18.5.1. (Added) QA FCF Manager will serve as the focal point to review all maintenance actions and to ensure all FCF requirements are accomplished.

8.18.5.1.1. (Added) Coordinate with the FCF OIC to acquire pilot for the FCF on aircraft type assigned to 56 FW. If an off-station pilot is used, the FCF OIC or representative will brief the pilot on local area procedures prior to the flight.

8.18.5.1.2. (Added) Coordinate with the deployed aircraft commander and home station to acquire an FCF pilot for aircraft type other than that assigned to the 56 FW.

Chapter 9

. IMPOUNDMENT PROCEDURES

9.2. Specific impoundment program procedures have been developed and published within this supplement to AFI 21-101.

9.2.1. (Added) If a single incident or event occurs that involves multiple end items owned by different squadrons; then each squadron will initiate the impoundment process for their owned asset, i.e., EMS Production Supervision would ensure impoundment of AGE, and Aircraft Maintenance Squadron (AMXS) Production Supervision would separately impound an aircraft (not in phase) for a related incident.

9.2.2. (Added) Procedures for Engine Removal from Impounded Aircraft:

9.2.2.1. (Added) The Aircraft Impoundment Official (IO) will notify CMS Production Super of the engine removal.

9.2.2.1.1. (Added) CMS Production Super will provide the names of gaining IA and IOs to QA to facilitate the new impound number and package for the engine.

9.2.2.2. (Added) The outgoing IO will brief the incoming IO on the affected equipment and all troubleshooting accomplished.

9.2.2.3. (Added) The original aircraft impoundment will be cleared normally.

9.2.3. (Added) QA will assist the IO in initiating impoundment and review final actions prior to release.

9.2.3.1. (Added) QA ensures the QA Impoundment Book, Event Log, Impoundment Tracking Log (to obtain Impoundment number) and the Impoundment Tracking Board are updated accordingly.

9.2.3.2. (Added) QA completes the impound placard information and initial heading information on all impoundment package forms and issue the impoundment package to the IO for placement on the affected aircraft, engine, or equipment.

9.4.1.1. (Added) Attachment 23, Table A23.1, *Mandatory Impoundments* and Table A23.2, *Warranted Impoundments*, add specific details applicable to impoundment of aircraft, engine, and equipment in the 56 MXG.

9.4.1.2. (Added) Table A23.2 is provided only as a list of suggested warranted impoundments. Impoundment authorities are not limited by this list.

9.4.6.6. Once an engine has been identified as having or suspected of having FOD the aircraft or engine impoundment decision will be based on guidance contained in Attachment 24.

9.4.6.6.1. (Added) If the FOD is considered to be isolated to the engine (not caused by or related to the aircraft) and the engine must be removed for repair, the owning unit will contact CMS Production Super to coordinate impoundment of the engine. This notification must take place upon verifying that the engine must come out due to FOD.

9.4.6.6.1.1. (Added) Once notified of an engine with impoundable FOD, CMS Production Super will contact MOCC to coordinate the engine impoundment.

9.4.6.6.1.2. (Added) The owning unit will remove the impounded engine but will not perform any additional maintenance to the engine without the impound official's permission.

9.4.6.6.2. (Added) When a FOD incident occurs during an engine maintenance run, any items contributing to the incident will be impounded (i.e., the aircraft, equipment, AGE, anti-personnel guard or bellmouth screen).

9.4.6.6.3. (Added) No maintenance action will be accomplished without the concurrence of the impoundment official. The wing FOD NonCommissioned Officer (NCO) and impoundment officer will jointly investigate the incident. In the event the wing FOD NCO is not available, MXQ and a representative from Wing Safety will perform the initial investigation following AFI 21-101, AETC SUP 1, LUKEAFB SUP 1, LUKEAFBI 21-107, *Preventing Foreign Object Damage* and AFI 91-204, *Safety Investigations and Reports*.

9.5.1.1. (Added) If the IO must be changed, notify IA and request the change (IA MUST approve the change). If approved, the IA must document the Impound Log authorizing the change for engines or equipment. For aircraft, an Info Note will be placed in the AFTO Form 781 series of the change. Once approved, notify QA and document the changeover on the Impoundment Worksheet. Ensure the gaining IO is fully briefed on all actions taken or in-work.

9.5.1.2. (Added) All IOs must attend the IO training course (code 32024) taught by QA to be certified as an IO. Course code 32024 will be tracked in IMDS. No IO will be authorized unless this course is accomplished and course code 32024 is updated in IMDS. Course code 32024 will be used to track authorized IO.

9.6.1.1. (Added) Ensure that a separate RED X symbol is placed in the applicable AFTO Form 781A or AFTO Form 244 with the word "IMPOUNDED" written in red and a statement indicating the reason for impoundment along with the name of the assigned IOs. If the equipment has no forms, attach an AFTO Form 350 with the appropriate text in the discrepancy block and border the tag in RED.

9.6.1. 2 . (Added) For aircraft impoundments, ensure a red-bordered AFTO 781A Impoundment Cover Sheet (obtained by QA) is placed immediately in front of the aircraft's AFTO Forms 781A.

9.6.4.1.2.1. (Added) Maintain the Aircraft/Engine/Equipment Impoundment Worksheet as applicable. Impoundment Work Logs will also be maintained for Engines and Equipment.

9.6.4.1.2.2. (Added) When reviewing the Impoundment Work Log, document the review on the Work Log after each entry with minimum signature, date and employee number for continuity.

9.6.5.1.1. (Added) Obtain all pertinent aircraft, engine, or equipment documentation files and forms to include, but not limited to; AFTO Form 781-Series, AFTO Form 350, AFTO Form 244, AFTO Form 95, Significant Historical Data, available data base reports, copies of shop logs, work packages, and IMDS history etc. Review all applicable items thoroughly and place

pertinent copies within the impoundment folder, listing attachments on the impoundment worksheet.

9.6.6.1.1. (Added) When a critical piece of equipment is removed from an impounded aircraft for back shop repair/bench check, ensure a red-bordered AFTO Form 350, Repairable Item Processing Tag, accompanies the item. The word “IMPOUNDED” will be written on the tag in the discrepancy block.

9.6.9.1. (Added) The owning squadron MOO/SUPT will review the impoundment and sign the impoundment worksheet recommending release.

9.6.9.2. (Added) A QA inspector will review all documentation and sign the review on the appropriate impoundment worksheet and AFTO Form 781A as applicable after the owning squadron OO/SUPT has reviewed all documentation. This review will be considered a forms review inspection and given a rating in the MSEP data base against the owning AMU or workcenter.

9.6.9.3. (Added) A QA inspector will accompany the IO to the impound release appointment.

9.6.9.4. (Added) If impoundment involves a Safety Investigation, ensure release is authorized by the board before exercising impoundment release authority.

9.6.9.5. (Added) The IO will sign the “CORRECTED BY” block) with the following corrective action statement: “INVESTIGATION COMPLETE, ALL CORRECTIVE ACTIONS HAVE BEEN REVIEWED, (pick one; AIRCRAFT/EQUIPMENT) RELEASED IAW AFI 21-101, SEE PAGE X ITEM X” (refers to original discrepancy). The MXG Release Authority will sign the impoundment worksheet (to include specifying if an OCF or FCF is or is not required) and as applicable sign the “INSPECTED BY” block of the AFTO Form 781A or AFTO Form 244 red X entry.

9.6.9.6. (Added) In the event an aircraft is impounded off station the 56 MXG Release Authority will review all required documentation IAW paragraph 9.6.13.1.1.4. of this supplement, sign off the impoundment worksheet and direct the IO to sign off the AFTO Form 781A impoundment discrepancy as follows: The IO will sign the “CORRECTED BY” block and input the following corrective action statement: “INVESTIGATION COMPLETE, ALL CORRECTIVE ACTIONS HAVE BEEN REVIEWED, (pick one; AIRCRAFT/EQUIPMENT) RELEASED IAW AFI 21-101, SEE PAGE X ITEM X” (refers to original discrepancy) Impoundment “Released by (Release Authority (RA) Name and Grade) on (Date and Time)”. The IO will then initial the “INSPECTED BY” block and place their last name initial over the symbol per TO 00-20-1 para 4.5.6.

9.6.9.7. (Added) After releasing the impoundment, the IO is responsible to clear the RA’s impoundment discrepancy in IMDS (if applicable). Show corrective action as “AIRCRAFT RELEASED BY (RA Name and Grade) ON (Date/Time)” and clear the entry using the “INSPECTED BY” block with corresponding RAs (MXG/CC or MXG CD) user ID. NOTE: The IO will use his/her user ID if the corresponding RA does not have a user ID or the user ID is unavailable.

9.6.13.1.1. (Added) Deployed and Off-Station Impoundment Procedures:

9.6.13.1.1.1. (Added) Prior to scheduled deployments the deploying maintenance officer will ensure there is a minimum of one qualified IA and one qualified IO scheduled for the

deployment. If there is no qualified IA or IO scheduled, ensure a letter is generated designating an IA or IO or both for the deployment and authorized by the 56 MXG/CC or MXG/CD. Ensure a copy of the authorization is given to QA prior to departure.

9.6.13.1.1.2. (Added) Aircraft that break off-station for an impoundable condition that have qualified F-16 maintenance personnel will request management of impoundment actions by the host base MXG/CC and QA. If this is not possible, proceed as if no F-16 support is available.

9.6.13.1.1.3. (Added) If no deployed F-16 maintenance support is available, Luke QA personnel provide the designated deploying IO with all needed documentation.

9.6.13.1.1.4. (Added) As requested by 56 MXG/CC or MXG/CD the applicable forms will be faxed to 56 MXG QA MXG for review and any required signatures. Fax or scan and email copies of aircraft forms (AFTO Forms 781A) along with aircraft impoundment review worksheet and red-bordered impoundment coversheet to 56 MXG QA (Fax number: DSN 896-7196, Commercial (623) 856-7196).

9.6.13.1.1.5. (Added) The deployed IO will return all impoundment documentation to QA upon return to home station if Luke QA personnel are not deployed to the same location.

Chapter 10

. TOOL AND EQUIPMENT MANAGEMENT

10.2.1. Refer to LUKEAFBI 21-102, *Tool and Equipment Management*.

Chapter 11

. MAINTENANCE SUPPLY SUPPORT

11.4. (Added) The 56 CMS Propulsion Flight will use engine identifier E001, E002, E003, E004, and E005 for ordering 21 AMU XB3 and XF3 engine parts.

11.19.1. Each squadron has designated local manufacture (LM) approval authorities. Requests for local manufacture are made through the requesting squadron's LM approval authority to the fabricating squadron's approval authority. Squadron commanders, maintenance superintendents, flight OICs/NCOICs, unit OICs/NCOICs, and production supervisors are approval authorities.

11.19.1.1. (Added) LM approval authorities will ensure this maintenance capability is not abused.

11.19.3.1. (Added) Upon notification of LM request, the fabricating LM approval authority will verify source maintenance recoverability (SMR) code and if required, the fabricating element will request proper depot disposition to authorize local manufacture. The requesting activity, if possible, will provide a sample or technical order information and/or drawings of the LM item and assist in identifying and obtaining required materials.

11.19.3.2. (Added) After LM has been approved and completed; the fabricating LM approval authority will ensure the depot requisition is canceled.

Chapter 12

. WING WEAPONS MANAGER AND WEAPONS STANDARDIZATION

12.1.15.1.1. (Added) For requirements on removal/installation of munitions, suspension equipment and tanks, refer to Attachment 25. Munitions or impulse cartridges will not be uploaded or downloaded while aircraft is on jacks, in the hush house, or outside the munitions loading area.

12.1.15.1.2. (Added) MAU-12 Bomb Rack Safety Pins will remain installed any time AME or munitions are installed on the pylon.

12.1.15.1.3. (Added) Launch/Recovery of Explosive Loaded Aircraft:

12.1.15.1.3.1. (Added) Personnel Limits: A minimum of two EOR arm/de-arm qualified individuals. One individual must possess a 5-skill level and be weapons checklist and marshalling qualified. All EOR servicing and maintenance personnel will be trained by weapons standardization on F-16 arm/de-arm procedures.

12.1.15.1.3.2. (Added) Location of Operations: The following are designated arm/de-arm aircraft parking areas as outlined in the Base Map Tab D-8 (Item 12A, North EOR- Item 12B, South EOR- Item 12C, Alternate North EOR pad west of runway 21R- Item 12D, Alternate South EOR pad east of runway 03L).

12.1.15.1.3.3. (Added) Immediately-prior-to-launch and safing procedures may be performed in the aircraft parking area for contingencies, unit exercises, and daily training missions as quantity distance clearance allows with the approval of wing safety, airfield management and the MXG/CC.

12.1.15.2.1. (Added) Hung inert/live bombs: EOR personnel will safe the aircraft IAW applicable technical data. If the aircraft cannot be safed, EOR personnel will direct the aircraft to shut down and notify MOC. MOC will dispatch AMU recovery/weapons personnel to download bombs and safe the aircraft as required. If aircraft/bombs cannot be safed, recovery/weapons personnel will notify MOC to continue hung ordnance procedures as required.

12.1.15.2.2. (Added) Hung 2.75" rockets: For an unexpended rocket with aircrew attempt (misfire condition), EOR personnel will safe the aircraft IAW applicable technical data and visually check the rocket. If proper safing procedures cannot be accomplished, direct the aircraft to the alternate de-arm area and notify MOC. MOC will dispatch AMU recovery/weapons personnel to assess condition of rocket. If rocket is safe, recovery personnel will safe the aircraft IAW applicable technical data and direct the aircraft back to its spot. If rocket is unsafe, recovery/weapons personnel will notify MOC to continue hung ordnance procedures as required.

12.1.15.2.3. (Added) Aircraft Gun System Malfunction:

12.1.15.2.3.1. (Added) Prior to aircraft shutdown, weapons maintenance personnel will establish communications with the pilot and examine the rounds counter to determine whether gun rotation occurred. If the gun system did not rotate, perform normal EOR procedures and allow the aircraft to taxi back to the parking ramp. **If the gun system rotated, the aircraft must**

be shut down in order to safely assess damage and determine if rounds are chambered. Personnel will not leave the aircraft unattended until the gun is safe.

12.1.15.2.3.2. (Added) Weapons maintenance personnel, with the assistance of 56th EMS armament personnel, if needed, will make every effort to clear the gun of all chambered rounds IAW applicable TOs.

12.1.15.2.3.3. (Added) If the gun cannot be cleared, qualified weapons maintenance personnel will remove the gun barrels and if possible remove the round/spent casing from the barrel. Use only hands (no tools) to remove rounds/spent casing from barrel. DO NOT pry/strike/force any rounds to free them from barrels. Removed gun barrels that still contain live rounds/spent casings will be oriented toward the least hazardous area and MOC will be called to have EOD dispatched to dispose of the gun barrel. Do not deliver gun barrels that contain live rounds or spent casings to the Armament Flight maintenance facility.

12.1.15.2.3.4. (Added) When a hung or unsafe gun is discovered on the aircraft parking ramp, personnel will continue with proper gun safing operations as stated in paragraph 12.1.15.5.3. If the gun cannot be immediately cleared, maintenance personnel will contact MOC with a gun problem (Emergency Action Checklist #17).

12.1.15.2.3.5. (Added) In the event that there are damaged rounds with exposed powder, maintenance crews will saturate the exposed powder with Break-Free. Damaged rounds/powder will be placed in a plastic Ziploc bag(s) and then into an ammo can clearly marked "Damaged Rounds, Lot #..., Quantity" then give to EOD personnel for disposal.

12.1.15.2.3.6. (Added) In the event EOD is not immediately available for removal of damaged rounds, place ammo can on weapons ready line for EOD to pick up the following morning. EOD need not be dispatched solely for pick up of ammo can with damaged rounds/powder. Expeditor will make note of quantity/lot number of damaged rounds turned into EOD on the Luke AFB Form 26 for reconcile purposes.

12.17. Procedures and requirements for de-arming, arming, and storage of explosives loaded on transiting aircraft are as follows.

12.17.1. Contracted Transient Alert (TA) personnel, will notify MOC of aircraft type, location, tail number, explosives type, and quantity on the aircraft to be loaded or downloaded.

12.17.2. 56 MOS/MOC will then notify the AMU providing TA support for the month (for F-16 aircraft only) to de-arm, arm, and store the explosive impulse carts (if applicable). 56 MXG Weapons Standardization (WS) will be called for non F-16 aircraft or munitions items the AMU is not qualified on. Impulse cartridges will be controlled IAW chapter 4 of this instruction. If impulse cart quantities exceed cart locker authorizations, the 62 AMU cart locker will be used, as needed.

12.17.3. If other storage is required for downloaded munitions, the supporting agency (WS or AMU) will contact 56 EMS Munitions Control Section for assistance.

12.17.4. The 56 EMS Munitions Flight will provide courtesy storage for the explosives as applicable IAW AFM 91-201.

Chapter 14

. ADDITIONAL MAINTENANCE REQUIREMENTS AND PROGRAMS

14.6.3. The Wing Avionics Manager will:

14.6.3.1.1.1. (Added) Act as the main point of contact for ASIP issues and distribute information received from Tinker AFB, OK, Lockheed Martin Tactical Air Systems and Pratt and Whitney to the unit ASIP Monitors.

14.6.3.1.1.2. (Added) Assist AMUs, squadrons and deployed units in resolving any ASIP problems.

14.6.3.1.4.1. (Added) Ensure ASIP data is retrieved by properly trained 2A3X2 (Flight Line Avionics Specialist). Comprehensive Engine Trending and Diagnostic System (CETADS) data will be retrieved by properly trained 2A6X1A (Propulsion Specialist 5-level or higher), 2A6X1D (Propulsion Specialist 3-level or higher), or 2A3X3 (Tactical Aircraft Maintenance Specialist 5-level or higher).

14.6.3.7.1. (Added) Complete a monthly crash survivable flight data recorder (CSFDR) report by consolidating the AMU monthly report information. Send the consolidated monthly report to HQ AETC.

14.6.5.1.1. (Added) Ensure crash survival flight data recorder (CSFDR) downloads are accomplished in accordance with technical orders, and documented in the AFTO Form 781A, and in IMDS. Downloaded CSFDR data will be transferred to Tinker AFB via the ASIP web site at <http://asimis.tinker.af.mil/f16/> whenever possible. If a web transfer is not possible, comply with the manual file transfer procedures outlined in TO 1F-16C-38, paragraph 3-18. Exception: The 21 AMU downloads are forwarded directly to Taiwan Program designated agencies.

14.6.5.1.2. (Added) CSFDR Upload Status Reports and System Maintenance. Successful file transfers will be documented by printing the CSFDR Upload Status report window that appears after a successful transfer to the ASIP web site. This printout will be maintained until a valid system maintenance summary for the most current download is printed and added to the book. The summary will be printed out monthly, with at least the last three months displayed in the report period.

14.6.5.1.3. (Added) The CSFDR download worksheet (Attachment 35) can be used as a backup source of information concerning the last download of an aircraft and may be filed in this section.

14.6.5.1.4. (Added) Submit a monthly CSFDR status report to the ASIP Project Officer by the 5th duty day of each month.

14.6.5.1.5. (Added) In the event of a download in conjunction with a mishap investigation, the manual transfer form must be filled out and sent (along with the download files) to the data center at the address listed in TO 1F-16C-38. Use of the CSFDR download worksheet (Attachment 35) is optional for all CSFDR downloads.

14.6.5.1.6. (Added) Ensure ASIP data is downloaded to an unclassified hard drive.

14.6.5.2.1. (Added) Maintain an ASIP continuity book containing the following sections as a minimum:

14.6.5.2.1.1. (Added) Table of contents.

14.6.5.2.1.2. (Added) Appointment letters (for both the 56 MXG ASIP Project Officer and the applicable AMU monitors).

14.6.5.2.1.3. (Added) CSFDR Monthly Download and System Status Reports. This section includes a Microsoft Excel spreadsheet that shows latest CSFDR downloads, along with the last downloads and hardware status log found on the ASIP website. Both of these products include the following information:

14.6.5.2.1.4. (Added) Aircraft tail number, signal acquisition unit (SAU) and crash survivable memory unit (CSMU) serial numbers. Date and airframe time of last download, and current status of the CSFDR system. The Microsoft Excel spreadsheet will include the national stock number, noun, and supply document number of any parts on order.

14.6.5.7. (Added) Be appointed in writing by the unit OIC (an alternate monitor will also be appointed). For the 425 AMU, the RSAF or USAF maintenance officer may be the appointing authority. For the 21 AMU, the program manager or his designated representative will be the appointing authority.

14.6.5.8. (Added) Establish and maintain accounts for the primary and alternate monitors for access to the ASIP web site. To obtain an account, call the ASIP office at DSN 336-3885 or send a request by email to f16asip@tilo.tinker.af.mil.

14.6.5.9. (Added) Ensure the Enhanced Diagnostic Aid and ample hard drives are taken to deployed locations to support deployed aircraft ASIP requirements.

14.6.5.10. (Added) Ensure technicians receive proper ASIP training of T.O. 1F-16C-38 and tasks identified in the Job Qualification Standard (JQS), and ensure training is properly documented in the JQS for all individuals with ASIP tasks identified as required tasks.

14.6.6.2.1. (Added) Monitor airframe hours and coordinate with AMU avionics technicians to ensure required inspections and downloads are complied with IAW TO TW/SN/1F-16A/C/CG/CJ-6 and TO 1F-16C-38.

14.6.6.2.2. (Added) Ensure a job standard is loaded into IMDS for scheduled CSFDR downloads.

14.6.6.2.3. (Added) Inform Non Destructive Inspection (NDI) section of any ASIP inspections which will be due during next aircraft phase inspection. Information will be passed during aircraft pre-dock meeting. Ensure a job is created in IMDS for all ASIP inspections due.

14.6.6.3. (Added) NDI Personnel will:

14.6.6.3.1. (Added) Attend aircraft phase pre-dock meetings. Review all inspections scheduled and coordinate with EMS representative for the best day of phase to accomplish work.

14.6.6.3.2. (Added) Document work completion and findings in aircraft forms, IMDS and Individual Aircraft Tracking (IAT) system web-site (<https://fs-ypvs-falcon.hill.af.mil/ASIPINSPECTIONS/default.aspx>).

14.6.6.3.2.1. (Added) Ensure sufficient work center access to IAT web-site for inputting and retrieving ASIP data.

14.6.7. (Added) CETADS Program Monitors will:

14.6.7.1. (Added) Be appointed in writing by the AMU maintenance officer (an alternate monitor will also be appointed). For the 425 AMU, the RSAF or USAF maintenance officer may be the appointing authority. For the 21 AMU, the program manager or his designated representative will be the appointing authority.

14.6.7.2. (Added) Ensure engine data is downloaded daily as soon as possible after last flight of the day. Propulsion Specialists will analyze the data for any anomalies and engine tracking information.

14.6.7.2.1. (Added) Ensure engine data from deployed aircraft are received from the deployed unit and forwarded to home station EMB.

14.6.7.3. (Added) Engine data will be transferred to disk and emailed to EMB at 56 MOS.MXOOE@luke.af.mil. NOTE: 21st FS engine data is transferred to disk and maintained by the 21st EMB Manager.

14.6.7.4. (Added) EMB will:

14.6.7.4.1. (Added) Review received data for any faults detectable at EMB. Report any faults immediately to engine specialists or production supervisors. If received from a deployed location, respond to the e-mail address as soon as faults are discovered. Request a response to ensure deployed unit receives fault data. If no response is made within 3 hours, contact the MOC and have them contact deployed location with fault data.

14.6.7.4.2. (Added) Provide engine data to manufacturer, monthly.

14.6.8. (Added) MOC will act as an alternate means for passing fault data to and from EMB.

14.8.7.1. (Added) For cannibalization required to fix a "Red Ball" discrepancy, a CA will designate which aircraft/equipment the cannibalized part will be removed from and which aircraft/equipment it will be installed on.

14.11.1.5.4. (Added) 56 FW FOD Prevention NCO or 56 MXG/MXQ and the AMU dropped object monitors, or their representative, will investigate the incident according to Luke AFB IMT 88, 56th Fighter Wing Dropped Object Worksheet. Routing and suspense for the Dropped Object Worksheet is as follows:

14.11.1.5.4.1. (Added) The respective AMU or 56 MOS/MXOOR (EOR) if applicable, will fill out date of incident, time MOC notified, and blocks 1 through 26 (AMUs will provide a complete summary of the events leading to the incident in block 25). Suspense is 1 duty day after incident.

14.11.1.5.4.2. (Added) The respective AMU or 56 MOS EOR supervision will review and sign block 27 of the Dropped Object Worksheet prior to forwarding to their respective squadron Operations Officer/Maintenance Superintendent for signature (exception 21 AMU). Suspense is 1 duty day after receiving form for signature.

14.11.1.5.4.3. (Added) The Dropped Object Worksheet will then be routed through the 56 MOS/56 AMXS/756 AMXS Operations Officer/Maintenance Superintendent (exception 21

AMU) for review and approval of the corrective action in block 26. The 56 MOS/56 AMXS / 756 AMXS Operations Officer/Maintenance Superintendent will also sign block 27a. Suspense is 1 duty day after receiving form for signature.

14.11.1.5.4.4. (Added) The Dropped Object Worksheet will be forwarded to the 56 FW FOD Prevention NCO, or alternate who will assign a report number, fill in blocks 28 through 32 and process the report. Suspense is 3 duty days after incident.

14.11.1.5.4.5. (Added) The Wing FOD Office will maintain the Dropped Object Worksheet and the processed report on file for 24 months and forward the processed report to the respective AMXS and AMU who will keep the report on file for 24 months.

14.11.1.5.4.6. (Added) The 56 FW FOD Prevention NCO will brief the Vice Wing Commander and AETC/A4; AETC Significant Events (normally through E-mail).

14.15.5.4.3. 1 (Added) Prolonged engine operation with the throttle positioned past the idle stop (i.e., troubleshooting requiring engine to run up and stabilize past idle stop) is not permitted on spot one of aircraft rows 10-15, 28-41, and spots one and two of row 27. Launch and recovery of aircraft is allowed.

14.15.5.4.3.2. (Added) Due to exhaust fume and jet blast hazards in hangar 995 (Egress), engine operation is not permitted on aircraft row 41, spots 3, 4, and 5.

14.15.5.4.3.3. (Added) For quiet hours refer to LUKEAFBI 13-203, *Airfield Operations and Base Flying Procedures*.

14.15.5.4.3.4. (Added) When utilizing trim pad 5 during hours of darkness, ensure one portable floodlight set is placed on each side of the aircraft.

14.15.5.4.4.1. (Added) 56 FW units performing engine run procedures at Gila Bend Auxiliary Field will follow established Gila Bend requirements and all applicable Luke AFB engine run requirements.

14.19.2.17. All government owned vehicles (GOV)s, contractors, privately owned vehicles (POV's) and any other vehicle operators, will perform a FOD inspection on all towed equipment, vehicles, vehicle tires and open cargo areas of vehicles prior to entering the runway, taxiway, flight line, and any other areas directed by the Wing Vice Commander (CV) or FOD Manager and Airfield Management. When inspecting tires ensure a roll over check is completed to ensure the entire surface is inspected for FOD, including the unseen area in contact with the pavement. Coordination between the wing FOD manager and Airfield Management is required to ensure FOD inspection checkpoints have signs posted and clearly marked.

14.19.2.17.1. (Added) Vehicle operators departing the paved surfaces will perform a FOD inspection of all equipment and vehicle tires immediately upon re-entering the paved surface of runways, taxiways, flight-lines, and aircraft parking ramp areas.

14.20.3. (Added) Required aircraft servicing, (including hydraulic, engine oil, fuel, nitrogen, and LOX), discovered and completed during inspections (PR/BPO, TH, etc.) will be annotated with amount serviced and equipment number on an INFO NOTE in the 781A's. If an original discrepancy exists the cart number may be documented the corrected by area of that discrepancy.

14.20.4. (Added) Units will document any intake and exhaust inspection requirement (work card, TO, or FO requirement) on a Red X symbol in the aircraft forms and MIS.

14.28.1. The Wing Avionics Manager (WAM) is appointed the RWR/RTHW Program Manager. The WAM is the POC for equipment issues that are beyond the scope of day to day operations. The WAM will compile a 56 FW JSECST quarterly status report and provide the report to the AETC Avionics Functional Manager.

14.28.1.1. (Added) Units will appoint a RWR/RTHW Reliability Program Monitor and alternate in writing and forward the appointment letter to the WAM.

14.28.1.2. (Added) Unit program monitors will establish and maintain a RWR/RTHW Reliability Program continuity book, maintain the JSECST tracking log, and forward a copy of the monthly record to the Wing Avionics Manager (no later than the 5th duty day of each month).

14.30.5. (Added) The Aircraft Maintenance Unit (AMU) production supervisors will review the aircraft forms for accuracy and completeness following Red Ball maintenance and accomplish the exceptional release (ER).

14.30.6. (Added) The AMU expediter will:

14.30.6.1. (Added) Ensure personnel performing Red Ball maintenance are qualified 5 or 7 level technicians. Three levels may assist in Red Ball maintenance but will not be left unattended.

14.30.6.2. (Added) Notify the production supervisor and the maintenance operations center (MOC) of all Red Ball maintenance requirements.

14.30.6.3. (Added) Notify MOC/Debrief when decision to discontinue Red Ball is made and tail number of spare aircraft if used (unless accomplished by production supervisor).

14.30.6.4. (Added) Notify MOC/Debrief of maintenance termination and corrective action.

14.30.7. (Added) Aircraft crew chief will:

14.30.7.1. (Added) Ensure aircraft exterior is safe IAW -6WC recovery procedures prior to allowing any maintenance personnel to perform Red Ball maintenance.

14.30.7.1.1. (Added) Ensure as a minimum Main Landing Gear pins (NOT Nose Landing Gear), Munitions safety pins (NOT the AIM-9 Dome Cover), External Tank safety pins, tail hook pin, and EPU safety pins are installed PRIOR to any Red Ball maintenance.

14.30.7.1.2. (Added) If engine shutdown is required to perform Red Ball maintenance, ensure ONLY the crew chief is in communication with the aircrew to perform engine shutdown. After engine shutdown has been accomplished ensure the applicable aircraft safe for maintenance is completed PRIOR to any Red Ball maintenance.

14.30.7.3. (Added) Maintain communication with aircrew when Red Ball technicians do not require direct interaction or communication with the aircrew.

14.30.7.4. (Added) Perform FO check of Red Ball area after maintenance actions have been completed.

14.30.8. (Added) Maintenance technicians performing Red Ball maintenance will:

14.30.8.1. (Added) Report to the crew chief in charge of launch procedures. Verify appropriate safe for maintenance was performed per Para 14.30.7.1 through Para 14.30.7.1.2.

14.30.8.2. (Added) Maintain communication with aircrew during all Red Ball maintenance when direct aircrew interaction is required to troubleshoot aircraft.

14.30.8.3. (Added) DO NOT instruct the aircrew to place the Main Power switch to Off during engine operation.

14.30.8.3.1. (Added) Before requesting an aircrew member to place the Main Power switch to Batt, technicians must verify the EPU mode switch is Off and the EPU safety pin is installed. The Main Power switch may be placed to Batt **ONLY** for Permanent Magnet Generator and Central Air Data Computer malfunctions. **NEVER** direct the aircrew to shutdown the aircraft; if aircraft shutdown is required to perform Red Ball maintenance, direct the individual in charge of the launch (crew chief), to shutdown the aircraft.

14.30.8.4. (Added) Perform FO check of Red Ball area after maintenance actions have been completed.

14.30.8.5. (Added) Notify AMU expeditor of corrective action and applicable work unit codes when Red Ball maintenance is completed.

14.30.8.6. (Added) Complete aircraft forms and Integrated Maintenance Data System (IMDS) documentation according to AFI 21-101 and TO 00-20-1.

14.30.9. (Added) AMU dispatcher or debrief will:

14.30.9. 1 (Added) Document Red Ball in IMDS and start each discrepancy block with Red Ball.

14.30.9.2. (Added) Notify the expeditor and debrief of Red Ball job control number.

14.30.9.3. (Added) Develop procedures to ensure the appropriate documentation is completed, whenever the Maintenance Information System is down.

14.37.1. The WAM is appointed the IFF Mode IV program manager.

14.37.1.1. (Added) Units will appoint an IFF Mode IV monitor and alternate in writing and forward the appointment letter to the WAM.

14.37.1.1.1. (Added) Unit program monitors ensure aircraft IFF Mode IV systems are ground checked in chocks prior to aircraft taxi until 100% bi-monthly requirement is reached.

14.37.1.1.2. (Added) Maintain an IFF Mode IV tracking log. Forward a copy of the bimonthly record to the Wing Avionics Manager no later than the 5th duty day of February (Dec-Jan report), April (Feb-Mar report), June (Apr-May report), August (Jun-Jul report), October (Aug-Sep report), and December (Oct-Nov report).

14.37.1.1.3. (Added) Ensure discrepancy is entered into the Integrated Maintenance Data System (IMDS).

Chapter 16

. AIRCREW EGRESS SYSTEMS MAINTENANCE

16.1.7.1. (Added) AMU plans and scheduling in coordination with AMU Production will:

16.1.7.1.1. (Added) Schedule seat/canopy 36-month inspections concurrent with the time change item, if due within the 9-month period.

16.1.7.1.2. (Added) Coordinate tentative schedule with Egress section 3 months in advance.

16.1.12. (Added) AMU personnel are responsible for canopy transparency cleaning and polishing in accordance with technical order TW/SN/1F-16()-2-12JG-00-1, Servicing. Transparency cleaning will be accomplished as required. However, as a minimum, transparency polishing will be accomplished every 14 days.

16.1.12.1. (Added) Only Egress personnel or FS DO or FCF pilot will determine canopy transparency discrepancies and serviceability. AMU will notify the Egress Section when transparencies are placed on order when determined unserviceable.

16.1.12.2. (Added) F-16 dual seat aircraft requiring a single transparency replacement (forward or aft) should have a cabin pressure test accomplished prior to canopy removal, and all leaks must be clearly marked on the canopy frame for the transparency that is not being replaced.

16.2.1. (Luke AFB) All off equipment canopy maintenance and inspections will be performed in the egress maintenance section or hangar 995.

16.2.1.1. (Added) Canopy or canopy and seat removals and installations will be accomplished inside a maintenance hangar if hangar space is available. Canopy or canopy and seat removals and installations will be accomplished outside a maintenance hangar only as a last resort and must be approved by 56 MXG/CC, 56 MXG/CD, or 56 MXG/CCM.

16.2.1.1. 1 (Added) Hangars 408, 431, 840, 913, 914, 984, and 995 are equipped with overhead hoists and are authorized for egress seat and canopy removal and installation.

16.2.1.1.2. (Added) Egress section will install canopy cover on aircraft upon removal of canopy.

16.2.1.2. (Added) Seat and canopy removal require the following configurations:

16.2.1.2.1. (Added) All A/C/CG-model aircraft must have the centerline external fuel tank removed if the 1500 lb utility-crane is used to remove canopy/seats.

16.3.2.1. (Added) Physical separation of occupants and explosives is not required for metro-type vehicles.

JERRY D. HARRIS, JR., Brigadier General, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 11-202V3, *General Flight Rules*, 22 Oct 2010

AFI 11-205, *Aircraft Cockpit and Formation Flight Signals*, 19 May 1994

AFI 11-218_AETCSUP 1, *Aircraft Operation and Movement on the Ground*, 24 Apr 2007

AFI 11-401, *Flight Management*; 10 Dec 2010

AFI 13-201, *Air Space Management*; 1 Dec 2006

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010

AFI 21-101 AETCSUP 1, *Aircraft and Equipment Maintenance Management*, 21 Oct 2010

AFMAN 33-363, *Management of Records*, 1 Mar 2008

LUKEAFBI 13-203, *Airfield Operations and Base Flying Procedures*; 1 Dec 2008

LUKEAFBI 21-102, *Tool and Equipment Management*

LUKEAFBI 21-107, *Preventing Foreign Object Damage*, 15 August 2009

LUKEAFBI 21-114, *Crashed, Damaged or Disabled Aircraft Recovery*, 17 April 2009

LUKEAFBI 21-117, *Product Improvement Program*, 9 June 2009

LUKEAFBI 21-123, *Standardization of Core Scheduling Practices*

LUKEAFBI 21-601, *Control, Accountability, and Reconciliation of Munitions*, 28 July 2009

LUKEAFBI 33-102, *Standardization of Radio Call Signs on Maintenance Radio Frequencies*, 17 August 2009

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*

TO 1-1-300; TO TW/SN/1F-16A/C/CM/CJ-6; TO TW/SN/1F-16A/C/CM/CJ-1, *Flight Manual*

LCL 56 MXQ-2, *High Speed Taxi Checklist*

Prescribed Forms

LUKE AFB IMT 88, *Dropped Object Worksheet*, 1 October 2004

LUKE AFB IMT 151, *Boresight and Coefficient Data*, 1 November 2004

Adopted Form(s)

AF Form 614, *Charge Out Record*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1256, *Certificate of Training*

AF IMT 310, *Document Receipt and Destruction Certificate*

AF IMT 853, *Air Force Wildlife Strike Report (Bird Strike Checklist)*

AF IMT 2047, *Explosives Facility License*

AF IMT 3136, , *(General Purpose) Oil/Hydraulic Cart Servicing Log*

AFTO Form 187, *Technical Order Publications Request*

DD Form 2861, *Cross Reference*

Abbreviations and Acronyms

ABQ—Albuquerque

AFB—Air Force Base

AFRIMS—Air Force Records Information Management System

AIR—Aviation Into-plane Reimbursement

ALS—Ammunition Loading System

CAC—Curriculum Advisory Committee

CETADS—Comprehensive Engine Trending and Diagnostic System

CSFDR—Crash Survival Flight Data Recorder

CSMU—crash survivable memory unit

DO—Director of Operations

EFT—External Fuel Tank

EMB—Engine Management Branch

EPU—Emergency Power Unit

FCF—Functional Check Flight

FS—Fighter Squadron

FS/CC—Fighter Squadron Commander

FW—Fighter Wing

GBN—Gila Bend

GOV—Government Owned Vehicle

GTIMS—Graduate Training Integration Management System

HEI—High Explosive Incendiary

HPD—hearing protection devices

HST—High Speed Taxi

IAT—Individual Aircraft Tracking

IFR—Instrument Flight Rule

IO—Impoundment Official

JSECST—Joint Service Electronic Combat Systems Tester

LM—Local Manufacture
MFSOV—Main Fuel Shutoff Valve
MXG/CC—Maintenance Group Commander
MXG/CD—Deputy Maintenance Group Commander
MOO—Maintenance Operations Officer
MX SUPT—Maintenance Superintendent
NCO—NonCommissioned Officer
NRR—noise reduction rating
NTC—Network Training Center
POV—Privately Owned Vehicle
PR/BPO—Preflight/Basic Post Flight
PW—Pratt & Whitney
QAS—First Level Supervisor for ALC
R&I—Removal & Install
RA—Resource Advisor / Release Authority
RAPCON—Radar Approach Control
RDS—Records Disposition Schedule
SAU—signal acquisition unit
SEFE—Standardization Evaluation Flight Evaluator
SJA—Staff Judge Advocate
TA—Transient Alert
TP—Target Practice
TPT—Target Practice Tracer
UALS—Universal Ammunition Loading System
UCMJ—Uniform Code of Military Justice
UTD—Unit Training Device
UWA—Underwing Adapters
VCO—vehicle control officer
VOCC—vehicle operations control center
WAM—Wing Avionics Manager
WRDOC—Wing Refuel Document Control Officer
WTT—Weapons Tactics Trainer

WWP—Wing Weapons Pylons

Attachment 23 (Added)

AIRCRAFT, ENGINE AND EQUIPMENT IMPOUNDMENT TABLES

(Added-Luke-AFB) Any aircraft, engine, or equipment reportable incident or unusual occurrence may require impoundment; each event will be evaluated on a case-by-case basis. Mandatory impoundments are outlined in AFI-21-101, Chapter 9. **No** maintenance will be performed until a determination for impoundment is made by an approved Impoundment Authority.

Table A23.1: (Added) Mandatory Impoundments as Outlined in AFI-21-101, Chapter 9.

	Conditions	Notes
1	General Mishaps and Incidents (On and Off-Equip)	
1.1	When aircraft or equipment is involved in an incident, or considered to be a reportable mishap (Class A, B, or C Mishap) per AFI 91-204 <i>Safety Investigations and Reports</i> , AFMAN 91-223, <i>Aviation Safety Investigation Reports</i> , and AFMAN 91-224, <i>Ground Safety Investigation Reports</i> . Note: Class-E incidents require notification of 56 FW Safety Office but unless listed separately in this table, are generally not impoundable incidents.	<ul style="list-style-type: none"> - Notify 56 FW Safety Office of incident details - In general all Class Reportable Mishaps require direct coordination with Interim Safety Board (ISB), Safety Investigation Board (SIB), or Safety Investigation Office (SIO) prior to release by the impoundment release authority. - Documentation and procedures per this supplement and AFI 21-101 is required unless it conflicts with AFI 91-204 and ISB/SIB/SIO guidance. Exception: The primary asset in a Class A Mishap will not require impoundment documentation. However, evidence impounded will conform to this supplement, AFI 21-101, and AFI 91-204
1.2	Any physiological incident to a rated aircrew member such as, but not limited to; hypoxia, hyperventilation, G-induced loss of consciousness, motion sickness, vertigo, etc.	<ul style="list-style-type: none"> - Attributable or believed to be aircraft related - See also this table item 1.1.
1.3	When there is evidence or suspicion of intentional damage, vandalism, tampering, or sabotage.	

Table A23.1. continued

	Conditions	Notes
1.4	Aircrew unintended departure from paved surface, runway, taxiway	
1.5	Suspected Nuclear, Biological, or Chemical Contamination	
1.6	When an Impoundment Authority directs.	- If impoundment condition is contained in Table A23.1, <i>Mandatory Impoundments</i> , Impoundment is Mandatory

		- If impoundment is contained in Table A23.2 <i>Warranted Impoundments</i> , or NOT contained in either Table A23.1. or A23.2. the impoundment will be considered Warranted unless directed otherwise by the Impoundment Authority
1.7	When an in-flight fire occurs	- See also this table item 1.1.
2	Flight Controls and Instruments (On-Equip Only)	
2.1	Flight control malfunction that results in an uncommanded change in altitude, attitude, heading, or difficulty in maintaining positive control.	- Excludes known interference by occupant in rear cockpit, however incident is still a Class-E reportable per this table item 1.1. - Includes during landing roll, takeoff or taxi.
2.2	Out-of-control/departure events, to include spins, rolls, and stalls	- Excludes intentionally induced departure (See AFMAN 91-223) - See also this table item 1.1.
2.3	Any aircraft not responding to auto fly-up command or warning.	- See also this table item 1.1.
2.4	Aircraft descends below 75% of set altitude clearance without an auto fly-up command, with fly-up system armed.	- See also this table item 1.1.
2.5	Block 20/25/32 flight control malfunction with the following: - Non-resettable "Dual Flight Control (FC)" - Any Dual FC with P, R, and/or Y light, whether resettable or not - Any "Dual FC" with any SERVO light, resettable or not.	- Excludes failures during self-test

Table A23.1. continued

	Conditions	Notes
2.6	Block 42/52 flight control malfunction that results in non-resettable or recurring "Dual Flight Control System (FLCS) Fail" warning light and/or "Dual FLCS" PFL (Blks 42/52).	- Excludes failures during self-test
2.7	Loss of all pitot static or all gyro-stabilized instruments or any multiple failure that would result in total loss of any directional or attitude indications (i.e., total failure	- See also this table item 1.1.

	of all pitch indications, total failure of all altitude indications, total loss of all heading indications etc.)	
3	Weapons (On-Equip)	
3.1	Uncommanded release of munitions or stores.	<ul style="list-style-type: none"> - No attempt was made to release munitions or stores from the selected station (uncommanded release) - Excludes multiple release of munitions or stores where quantity released is greater than quantity selected and release occurs simultaneously or concurrently from selected station(s) (See also, Table A23.2., item 3.1.) - See also this table item 1.1.
3.2	Late release of munitions or stores	<ul style="list-style-type: none"> - Munitions or stores were selected but released greater than 10 seconds after expected release or impacted off-range (See also this table item 1.1. and Table A23.2., item 3.2.)
	(On and Off-Equip)	
3.3	Unintentional release, firing, or activation of munitions, munitions system, pyrotechnic device or stores collectively referred to as (explosive devices).	<ul style="list-style-type: none"> - Includes munitions or stores selected for release/firing but human factors, failure of safety devices, or other problems occurred resulting in an unexpected release/firing when none was intended (i.e., gun simulations when gun fires or rotates, ground maintenance operations that results in actual stores jettison etc.) - Includes any release of munitions that impact off-range - Includes any unintentional activation of an explosive device (i.e., impulse cart, 20mm ammunition, egress component etc.) - Excludes chaff and flare when release is due to human factors and release occurs on-range with no known damage - See also this table item 1.1.

Table A23.1. continued

	Conditions	Notes
3.4	Runaway gun	<ul style="list-style-type: none"> - Gun fails to stop firing when trigger is released (See also this table item 1.1.)
4	Environmental (On-Equip Only)	
4.1	In-flight loss of primary oxygen system	<ul style="list-style-type: none"> - Includes empty liquid oxygen converter (See also this table, item 1.2.)
4.2	Suspected oxygen system contamination or unusual odor from oxygen system	
4.3	Sudden or explosive loss of cabin pressure	<ul style="list-style-type: none"> - Excludes failure of the cockpit to pressurize during climb-out or slow loss of cabin pressure for environmental bleed air failure (See also this table, item 1.2.)

		- See also this table item 1.1.
5	Electrical (On-Equip Only)	
5.1	Electrical fire or catastrophic failure of wiring harness	- Includes all damage to harnesses from current flow - Excludes abraded or cut harnesses that show little or no evidence of current flow damage - See also this table item 1.1. - Mandatory deficiency report required per applicable General Vehicle (00GV) technical order
5.2	Explosive or catastrophic (case rupture) battery failure	
6	Emergency Power Unit (EPU) (On-Equip Only)	
6.1	EPU uncommanded activation	- Mandatory F-16 SPO TAO checklist reporting
6.2	In-flight failure of EPU to activate or operate when commanded manually or automatically	- Mandatory F-16 SPO TAO checklist reporting
6.3	In-flight abnormal operation	- Mandatory F-16 SPO TAO checklist reporting
6.4	Suspect liquid hydrazine contamination of aircraft structure	- Includes large leaks internal to the aircraft or that may have seeped into the aircraft structure (H-70 is highly corrosive) - Excludes small or vaporous leaks

Table A23.1 continued

	Conditions	Notes
6.5	Hydrazine leak or incident resulting in injury to personnel	- Excludes routine screening of personnel involved in hydrazine incidents unless overexposure is confirmed - Includes incidents of known overexposure or sickness associated with hydrazine exposure - See also this table item 1.1.
7	Airframe General (On-Equip Only)	
7.1	Unusual noise or vibration	- Includes installed engines
7.2	Simultaneous failure of A and B hydraulic systems	- Excludes indication malfunctions - Includes over-pressurization or under-pressurization - See also this table item 1.1.
7.3	Structural chemical contamination	- Includes exposures to chemicals such as mercury, hydrazine (see 6.4. and 6.5.), and caustic cleaners (i.e., accidental use of Simple Green or Grease Lightning)
7.4	Fire or evidence of fire or heat damage to aircraft, aircraft components or aircraft structure.	- Excludes fires contained in components such as engines or generators that do not effect external components or structures - See also this table item 1.1.
8	Landing Gear, Brakes, Steering	

	(On-Equip Only)	
8.1	In-Flight failure of any landing gear to fully extend and lock following alternate extension	- Excludes indication malfunctions - See also this table item 1.1.
8.2	Landing gear collapse or uncommanded retraction/extension	- See also this table item 1.1.
8.3	Unrecoverable brake failure	- Excludes failure for prolonged usage after B-System hydraulic failure - See also this table item 1.1.

Table A23.1 continued

	Conditions	Notes
9	Engine	
9.1	(Installed Engines Only)	
9.1.1	Loss of thrust or no throttle response.	- Exclude expected performance losses for augmentor malfunction, exhaust nozzle position errors, and secondary fuel control (SEC) operation - FCF requirements may apply, see applicable -6 TO - See also this table item 1.1. - Mandatory F-16 SPO TAO checklist reporting
9.1.2	Stall	- Exclude stalls that occur with throttle in augmentor range or pilot induced through syllabus/checklist requirements - FCF requirements may apply, see applicable -6 TO
9.1.3	Stagnation or in-flight engine shutdown.	- Engine stagnations are NOT recoverable and must be shutdown and restarted - Exclude under this category any engine that recovers without being shutdown - Include any commanded or uncommanded in-flight engine shutdown - FCF requirements may apply, see applicable -6 TO - See also this table item 1.1. - Mandatory F-16 SPO TAO checklist reporting
9.1.4	Flameout or die-out.	- FCF requirements may apply, see applicable -6 TO - See also this table item 1.1. - Mandatory F-16 SPO TAO checklist reporting
9.2	(Installed or Removed Engines)	
9.2.1	Case rupture, penetration or burn-through.	- Exclude damage that does not penetrate the outer engine casing (fan duct case, bypass area case and augmentor case) - See also this table item 1.1.
9.2.2	Engine foreign object damage that will necessitate engine removal and teardown for repair (use Attachment 24).	- For installed engines use Attachment 24 to determine if impound is warranted. (See LUKEAFBI 21-107, <i>Preventing Foreign Object Damage</i> , Attachment 2. - If engine must be disassembled for repair, impound the

		engine ONLY .
9.2.3	Engine damaged while in transport	- For uninstalled engines damaged in transport, engine is placed on impoundment. Investigation of engine damage will be performed to determine extent of damage and cause.

Table A23.1 continued

	Conditions	Notes
10	Aircraft and Equipment General (On and Off-Equip)	
10.1	Unusual or unknown fluid system contamination	<ul style="list-style-type: none"> - Include suspected serious cross-contamination of oil, hydraulic fluid, fuel, with unknown fluids, water, or cleaners etc. - Include contamination of servicing units such as hydraulic carts, nitrogen carts etc. - Include on-aircraft contamination not covered in technical data. - Exclude on-aircraft contamination for known malfunctions. Typical contaminants such as hydraulic fluid in fuel, fuel in oil systems, metals in filters etc. are known contaminations that occur as the result of normal system failures. - Exclude contamination of hydraulic mules for known aircraft system contamination

Table A23.2: (Added) Warranted Impoundments.

	Conditions	Notes
1	General Mishaps and Incidents (Aircraft and Equipment)	
1.1	When there is evidence of damage of an unknown nature significant or unusual enough to warrant impoundment but NOT contained in <i>Mandatory Impoundments</i> or AFI 21-101, Chapter 9	- Determination made by an Impoundment Authority, if impounded, impoundment will be WARRANTED unless specifically directed by the Impoundment Authority as MANDATORY
1.2	(Added)When aircraft sustains FO damage from unknown cause	
1.3	Repeat or recurring malfunctions that warrant a more in-depth investigation	
1.4	When 56 MXG/CC or CD directs	- Impoundment will be considered MANDATORY unless specifically directed as WARRANTED

1.5	When an Impoundment Authority directs	<ul style="list-style-type: none"> - If impoundment condition is contained in Table A23.1., <i>Mandatory Impoundments</i>, Impoundment is MANDATORY - If impoundment is contained in Table A23.2 <i>Warranted Impoundments</i>, or NOT contained in either Table A23.1. or A23.2. the impoundment will be considered WARRANTED unless instructed otherwise by the IA
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Table A23.2. continued

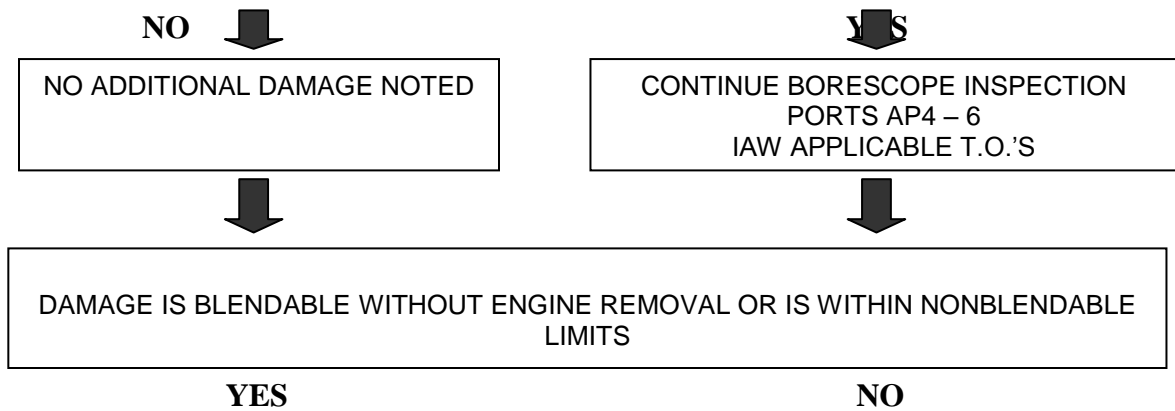
	Conditions	Notes
2	Flight Controls and Instruments (Aircraft Only)	
2.1	Repeat or recurring system anomalies that degrade mission performance	
3	Weapons	
3.1	Multiple release of munitions or stores	- Includes multiple release of munitions or stores where quantity released is greater than quantity selected and release occurred simultaneously or concurrently from selected stations
3.2	Hung munitions or stores.	<ul style="list-style-type: none"> - Munitions or stores selected but did not release or fire - Munitions or stores must return safely from flight (See Table A23.1. <i>Mandatory Impoundments</i>, item 3.2.)
3.3	Gun sudden stoppage, double feed or serious malfunction	
3.4	Missing hardware or loose object found in gun bay area	
4	Environmental (On-Equip Only)	
4.1	Damage from high temperature bleed air	
5	Electrical (On-Equip Only)	
5.1	Unusual or recurring power bus interruptions	
5.2	Burnt or melted components	<ul style="list-style-type: none"> - Include only when isolated to that component - Consider possibility of external cause for damage or external failures created as the result of damage
5.3	Unusual malfunction when more than one system is affected or other significant event related to wire chafing	

Table A23.2. continued

	Conditions	Notes
6	Emergency Power Unit (EPU) (On-Equip Only)	
6.1	Recurring or unusual hydrazine leak not defined under <i>Mandatory Impoundments</i>	
6.2	Any EPU activation	- Included based on mandatory F-16 SPO TAO checklist reporting requirement
7	Aircraft General (On-Equip Only)	
7.1	Main Fuel Shutoff Valve (MFSOV) abnormality	- Included based on mandatory F-16 SPO TAO checklist reporting requirement
8	Landing Gear, Brakes, Steering (On-Equip Only)	
8.1	Landing gear fails to extend or retract	
8.2	Nose wheel steering recurring fail or hard-over failure	
8.3	Recurring gear malfunctions or when reported gear malfunction cannot be duplicated	
8.4	Tire Failure	- Included based on mandatory F-16 SPO TAO checklist reporting requirement
9	Engine	
9.1	(Installed Engines)	
9.1.1	Hardware belonging to engine found missing from engine	
10	Aircraft and Equipment General (On and Off-Equip)	
10.1	Lost tool, equipment, or object.	- Refer to LUKEAFBI 21-107

Attachment 24 (Added)

SAMPLE ENGINE FOD IMPOUNDMENT LOGIC TREE



AIRCRAFT MAINTENANCE CONFIGURATION REQUIREMENTS

[illegible]

Attachment 26 (Added)

F-16 HANGAR (PRE & POST) ENTRY CHECKLIST

Table A26.1. F-16 Hangar (Pre & Post) Entry Checklist. Attachment 26 continued (Added)

AF IMT 2519 (Continued).				
ALL PURPOSE CHECKLIST				
		PAGE 2	OF 2	PAGES
NO.	ITEM (Assign a paragraph number to each item. Draw a horizontal line between each major paragraph.)			
	HANGAR POST ENTRY ACTIONS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.	Aircraft positioned, chocked, and grounded.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Drip pans positioned under aircraft as required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	In hangars without fire suppression systems, one 150-lb. Halon fire extinguisher positioned at each aircraft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Canopy fully closed or cockpit covered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Protective covers/bumpers installed on:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1.	Wing trailing edges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2.	Horizontal stabilizers (leading and trailing edges).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3.	Static dischargers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Fuel cell maintenance - aircraft battery disconnected and cannon plug capped.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	All AFTO Form 781A entries completed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOW TEAM SUPERVISOR: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(PRINTED NAME, ORG. & PHONE #)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ (SIGNATURE)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AIRCRAFT ACCEPTED BY: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(IF APPLICABLE) (PRINTED NAME, ORG. & PHONE #)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ (SIGNATURE)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56 MXG/QA OVERPRINT FEBRUARY 2005		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Attachment 27 (Added)**SAMPLE REQUEST FOR DEPOT ASSISTANCE WORKSHEET (107-M)**

NOTE: THIS WORKSHEET MUST BE COMPLETED IAW PARAGRAPH 7.2.5.7. OF AFI 21-101 LUKE AFB SUP 1.

Aircraft serial number(s) affected: _____. Is aircraft flyable? Yes / No

Requester: _____
(Name Rank, AMXS, AMU, Office Symbol, Phone #)

POC (if different from requester) _____
(Name, Rank, AMXS, AMU, Office Symbol, Phone #)

Reason for -107 request: _____

Have any Air Force Materiel Command engineers, equipment specialists, LM AERO or other depot personnel already been contacted on this matter? Yes / No

If yes, name and phone number of depot personnel contacted: _____

COORDINATION:

AMXS Maintenance Supervision: Concur/Non-Concur

(Name, Rank, Phone #) Date/Time ____/____

CMS SUPERVISION: Concur/Non-Concur

(Name, Rank, Phone #) Date/Time ____/____

EMS SUPERVISION: Concur/Non-Concur

(Name, Rank, Phone #) Date/Time ____/____

AFETS: Concur/Non-Concur

(Name, Rank, Phone #) Date/Time ____/____

QA Chief Inspector: Concur/Non-Concur

____ Date/Time ____/____
(Name, Rank, Phone #)

APPROVAL:

QA Superintendent: Concur/Non-Concur

____ Date/Time ____/____

MXG/CD: Concur/Non-Concur

____ Date/Time ____/____

MXG/CC: Concur/Non-Concur

____ Date/Time ____/____

MOF/PS&D: Date/Time Received ____/____

MOF/PS&D will generate the 107-M request message after MXG/CC approval.

Attachment 28 (Added)**PHYSIOLOGICAL INCIDENT CHECKLIST**

Purpose: This checklist assists fighter squadrons with physiological incidents. Presently, T.O. 1F-16 A/C/CG/CJ-6 contains no guidance on physiological incidents. The applicable system TOs will be used to accomplish required checks, troubleshooting, and repairs.

A28.2.**Aircraft Maintenance Unit (AMU) Actions:**

A28.2.1. Perform pilot/crew member interview (see paragraph A28.4 of this checklist) as soon as possible.

A28.2.2. Based on the results of the pilot/crew member interview, Impoundment Authority (IA) will determine whether to impound the aircraft or not. (C/W) (N/C/W) Circle one.

A28.2.3. Ensure the Liquid Oxygen (LOX) cart that serviced the aircraft is immediately routed to the LOX plant for contamination assessment. (C/W) (N/C/W) Circle one.

A28.2.4. Based on the results from the Lox plant assessment, IA will determine whether to impound the LOX cart that serviced the aircraft or not. (C/W) (N/C/W) Circle one.

A28.2.5. Include this completed checklist with all impound documentation for Quality Assurance and Maintenance Group commander review.

A28.3.**Lox Plant Actions:**

A28.3.1. Immediately assess the impounded LOX cart for contamination. (C/W) (N/C/W) Circle one.

A28.3.2. Was the LOX cart contaminated? (YES) (NO) Circle one. If NO, notify the fighter squadron production superintendent (pro-super), clear the AFTO Form 244 entry, and release the LOX cart for use on the flight line. If YES, determine how many aircraft were contaminated and immediately notify MOC and the squadron pro-super for grounding of affected aircraft.

A28.4. Pilot/Crew member Interview:

A28.4.1 Were there any unusual smells or odors from oxygen system and/or crew station? (YES) (NO) Circle one.

A28.4.2. Was there an anti-g system problem? (YES) (NO) Circle one.

A28.4.3. Was there a cabin pressure problem? (YES) (NO) Circle one.

A28.4.4 Was there a problem with the oxygen system? (YES) (NO) Circle one.

A28.4.5 Was there an airflow problem? (YES) (NO) Circle one.

A28.4.6. Were the oxygen regulator switches positioned incorrectly? (YES) (NO) Circle one.

A28.5.

Inspections and Checks: Utilizing interview results operationally check and troubleshoot the affected systems in accordance with applicable TOs, make repairs as required.

A28.5.1. Cabin pressure check (21JG-00-1). (C/W) (N/C/W)

A28.5.2. 180-day oxygen regulator check (35JG-00-1). (C/W) (N/C/W)

A28.5.3. Anti-G valve functional check (21JG-00-1). (C/W) (N/C/W)

A28.5.4. Inspection of crew station for contamination (such as fuel, oil, etc.). (C/W) (N/C/W)

A28.5.5. Perform a LOX converter and tubing purge (35JG-00-1). (C/W) (N/C/W)

A28.5.6. Operate the ECS system utilizing external bleed air and check for abnormal odors. (C/W) (N/C/W)

A28.5.7. Perform an engine maintenance run. Check for abnormal odors. (C/W) (N/C/W)

Attachment 29 (Added)

ENGINE RELATED OPERATOR DEBRIEF CHECKLIST

Table A29.1. Engine Related Operator Debrief Checklist.

Procedures

1	Operator Debrief Checklist:		
	a	Aircraft serial number:	
	b	Operator(s) name:	
	c	Date/Time of event:	
	d	Debrief(s) name:	
2	Prior to Flight:		
	a	What was the mission scenario and aircraft configuration	
	b	List any discrepancies noted during walkaround	
	c	HUD/AVTR available	
	d	CSFDR installed (check one)	<input type="checkbox"/> YES <input type="checkbox"/> NO
	e	List any anomalies during taxi or EOR checks	
	f	Was it the aircraft's 1st/2nd/3rd flight of the day	
3	Circumstances Prior to Event:		
	a	Describe takeoff performance (normal, engine slow to respond, slow aircraft accel, vibration etc.)	
	b	List any abnormalities noted during flight prior to the event (unusual fuel flow, engine indication, noise or vibration, etc.)	
	c	List any caution/warnings that illuminated	
	d	What maneuvers were being performed prior to the event?	
	e	If test page was called up, list any MFLs, PFLs present prior to event	
	f	Document weather condition at time/location of event to include temperature dew point	
4	Circumstances at Event:		
	a	Describe the first indication of malfunction (deceleration, RPM,	

		fluctuations, caution or warning light, engine noise)	
b		What was the throttle position or RPM at the time of the event	
c		List any other switches or controls being manipulated immediately prior to event	
d		Was ENG CONT switch in PRI/SEC when the event occurred	
e		Did the engine auto-transfer to SEC	
f		List any caution/warning lights that illuminated after event	
g		List any cockpit pressure problems at any time (loss of pressurization, Environmental control system (ESC) noises, smoke/mist in cockpit, cockpit temperature change)	
h		List any unusual cabin environment problems, other than loss of pressurization, ECS noises, smoke/mist in cockpit, cockpit temperature change	
i		Was a pilot data save initiated?	
j		List the following indications at the time of the event:	
	1	MACH NUMBER	
	2	ALTITUDE	
	3	AOA	
	4	YAW	
	5	RPM	
	6	FTIT	
	7	G METER	
	8	WEATHER	
	9	NOZ POS	
	10	OIL PRESSURE	
5	Circumstances After Event:		

a	If any, list MFLs, PFLs displayed after event	
b	What problems (if any) were noted with engine during return to base?	
c	What problems (if any) were noted during post flight walk around?	

Attachment 30 (Added)

SAMPLE MAIN FUEL SHUTOFF VALVE (MFSOV) QUESTIONNAIRE

FOR ALL F-16 BLOCKS

THE USE OF THIS QUESTIONNAIRE IS FOR REPORTING ANY DISCREPANCY RELATING TO OTHER THAN NORMAL OPERATION OF THE MFSOV OR ANY UNKNOWN CONDITION OR DISCREPANCY THAT MIGHT INDICATE ABNORMAL OPERATION OF THE MFSOV.

****WARNING****

DOWNLOAD THE CSFDR PRIOR TO ACCOMPLISHING ANY MAINTENANCE ACTION THAT REQUIRES APPLYING EXTERNAL ELECTRICAL POWER. ACCOMPLISH A MISHAP/MAINTENANCE DOWNLOAD OF ALL DATA TYPES. DO NOT FORMAT THE SAU OR CSMU, OR CLEAR USAGE ACCUMULATORS OR FLIGHT COUNTS

1. AIRCRAFT INFORMATION

- a. Aircraft MDS: F-16 (A) (B) (C) (D) (*Circle Response*)
- b. Aircraft Block No: (10) (15) (20) (25) (30) (32) (40) (42) (50) (52) (*Circle Response*)
- c. Aircraft Serial No: _____
- d. Aircraft Total Accumulated Flight Hours: _____
- e. Date Event Occurred: _____ (*ddmmyy*)
- f. Location Of Aircraft At Time Of Discovery _____
- g. Name And Phone Number Of:

Pilot: _____	Phone No: _____
Debrief: _____	Phone No: _____
Discovered By: _____	Phone No: _____
- h. MFSOV Part Number: _____
- i. MFSOV Manufacturer By Name: _____
- j. MFSOV Serial Number: _____

Describe The Event/Discrepancy:

2. PILOT AND/OR MAINTENANCE DEBRIEF

- a. When was the discrepancy discovered? (*Prelaunch Check, After Engine Start, During Taxi, E.O.R., After Flt, Recovery, Operational Check*) _____

- b. What number flight was the discrepancy discovered on? (*Example: First, Second, Third Flight of the Day; Hot Pits, Quick Turn*) _____
- c. Were there any previous signs of a discrepancy prior to discovery? (*Abnormal Indications*) _____
- d. Was the discrepancy discovered prior to battery power being applied to the MFSOV? _____
- e. What position was the fuel master switch in at time of discovery? _____
- f. Was the MFSOV position verified at the same time the cockpit fuel master switch was checked? What were their positions? _____
- g. Were there any abnormal cockpit indications prior to or at the time of discovery? ---- _____

- h. If discovery was after engine start, estimate how much time elapsed since start? _____
- i. If discovery was after engine start, was the start normal? _____
- j. What actions did you take as a result of the event/discrepancy or discovery? (*Please Be Specific*) _____

3. MAINTENANCE ACTIONS AND QUESTIONS FOR UNIT

- a. What is the current configuration of the MFSOV? (*Has the valve been restored to its operational status –post TCTO 1F-16-1977, list date of compliance*) _____
- b. When was MFSOV last inspected? (Please be specific) (*EXAMPLE: Pre-Launch Check, Preflt Insp - 10 Clock Hours Had Elapsed or Thruflt Insp - 1.5 Clock Hours Elapsed*) _____

- c. Was there any maintenance actions completed on the aircraft since the last MFSOV inspection
or a pre-launch check that may have contributed to this
event? _____

- d. Was there any unknown anomalies that caused the MFSOV to be suspect? (*Please describe circumstances surrounding the event, to include any engine events that may implicate the MFSOV*) _____
- e. What is part number (PN) of MFSOV actuator? _____
- f. If MFSOV actuator PN is 40283D, is fail safe module PN, 8560 installed? _____
- g. What is PN of fuel control panel, if D-model fwd and aft _____
- h. Identify any maintenance actions or replaced parts on the MFSOV assembly within the last year. (*List all pertinent information to include: discrepancy, date, noun, NSN, P/N, serial no., manufacturer*) _____

4. SPECIAL INSTRUCTIONS

If MFSOV abnormal operations occurred and certain component(s) were determined to be at fault or suspected to be at fault, submit DR against the item(s) and hold for exhibit. Submit the exhibit per the disposition instructions in response to the DR.

****Use the Internet mail address to electronically transfer the downloaded CSFDR file(s), checklist, and DR RCN number(s) to:**

hill.falcon.hotline@hill.af.mil
Travis.Moulding@hill.af.mil
dllmtasflightsafety@imc7.ems.lmco.com

****If E-Mail is not available mail to:**

**LM Aero Flight Safety
Mail Zone 2665
P.O. Box 748
Fort Worth TX 76101-0748**

LM Aero Flight Safety Phone: DSN 739-5000, LM Aero ext 32301 or Commercial (817) 763-2301

FAX COMPLETED COPIES OF THIS CHECKLIST AND COPIES OF THE DR TO: OO-ALC/500 ACSS/GFLC

Email: hill.falcon.hotline@hill.af.mil
FAX DSN: 777-4900 Commercial: 801-777-490
Phone DSN: 777-0812 Commercial: 801-777-0812

POC for this checklist is MSgt James Jordan, 500 ACSS/GFLC, DSN 777-0812

Attachment 31 (Added)**FOR REFERENCE ONLY****ENSURE THIS VERSION MATCHES CURRENT TECHNICAL DATA PRIOR TO USE!****EPU Activation Checklist****NOTE:**

A31.1. This checklist may be copied, completed by hand, and faxed to the phone number or mailed to the address at the end of this checklist. Checklist submittal is required for all EPU activations.

A31.2. Activation where EPU appears to function normally require CSFDR data download submission and checklist submission.

A31.3. Activations where EPU appears to function abnormally require notification of organizations in step 6, CSFDR data download submission, checklist submission, and DR action on all replaced components other than refurbishment parts.

A31.4. Completion of this checklist is not required if performing corrective action for a H-70 leak not associated with EPU activation.

A31.5. Completion of this checklist is required whether EPU activation was commanded or un-commanded.

NOTE: Complete steps 3.a, 3.b, and 3.c for all EPU activations (manual and automatic).

- a. What was the pressure gauge reading on the H-70 tank prior to depressurization?

_____psi (Normal is 400 ((± 20) psi

- b. How much H-70 fuel was used (in lbs. based on tank weight)?

_____lbs

- c. What was the nitrogen bottle gauge indicating?

_____psi

NOTE: Complete steps 3.d, thru 3.i for all abnormal EPU activations.(Circle response)

- d. Did H-70 leak? (Yes) (No)
If yes, where?

- e. H-70 downstream of catalyst? (Yes) (No)

- f. Was the EPU primary speed control failure indicator tripped? (Yes) (No)

- g. Was the hydraulic pressure switch disconnected?
(Yes) (No)

- h. Was the nitrogen valve electrical connector disconnected? (Yes) (No)

- i. Was there any other anomalies? (Yes) (No)

If yes, briefly describe:

4. Required follow-up actions: (Circle response)

- a. Submitted a DR on all replaced components other than refurbishment parts.
(Yes) (No)

- b. List all replaced components other than refurbishment parts:

5. EPU system maintenance history: Use (dd/mm/yy) date format

- a. When was the catalyst bed (gas generator) iridium last measured? _____

- b. When was the last time nitrogen was serviced?

- c. Identify any prior maintenance actions (M) and/or replaced parts (R) on the EPU system in the last 180 days before the abnormal activation? (Circle response)

- | | | |
|---|-----|-----|
| (1) Gas generator | (M) | (R) |
| (2) EPU fuel tank and fuel quantity indicator | (M) | (R) |
| (3) Nitrogen valve | (M) | (R) |
| (4) Heat exchanger | (M) | (R) |

(5) EPU controller (M) (R)

(6) Turbine power unit (M) (R)

Briefly state what maintenance actions occurred from each circled item (s):

6. Submittal instructions:

- a. Use the Internet addresses to electronically transfer the downloaded CSFDR data, this checklist, and DR RCN numbers to:

Hill.Falcon.Hotline@hill.af.mil
Falcon Hotline@wpafb.af.mil
Fw-flight.safety@lmco.com

- b. If email is not available, mail required documents and downloaded CSFDR data to:

LM Aero Flight Safety
Mail Zone 8607
P.O. Box 748
Fort Worth, TX 76101-0748
Lockheed Martin Flight Safety (817) 935-4430/4431/4432/4434

Provide a return address to LM Aero

- c. Fax checklist to:

500 ACSS/GFLC Attn: MSgt James Jordan DSN 777-4900 Comm (801) 777-4900

Attachment 32 (Added)

SAMPLE TIRE FAILURE INCIDENT CHECKLIST

THE USE OF THIS CHECKLIST IS FOR REPORTING ANY TIRE FAILURE INCIDENT AND THE CIRCUMSTANCES SURROUNDING THE EVENT.

****WARNING****

DOWNLOAD THE CSFDR PRIOR TO ACCOMPLISHING ANY MAINTENANCE ACTION THAT REQUIRES APPLYING EXTERNAL ELECTRICAL POWER. ACCOMPLISH A MISHAP/MAINTENANCE DOWNLOAD OF ALL DATA TYPES. DO NOT FORMAT THE SAU OR CSMU, OR CLEAR USAGE ACCUMULATORS OR FLIGHT COUNTS

1. AIRCRAFT / TIRE INFORMATION

- h. Aircraft MDS: F-16 (A) (B) (C) (D) (*Circle Response*)
- i. Aircraft Block No: (10) (15) (20) (25) (30) (32) (40) (42) (50) (52) (*Circle Response*)
- j. Aircraft Serial No: _____
- k. Aircraft Home Station: _____
- l. Base Where Event Occurred: _____
- m. Aircraft Weight In Pounds At Failure: _____
- n. Date And Time Event Occurred: _____ (*dd/mm/yy / time*)
- o. Event Occurred Upon Take-off / Landing / Taxi / Other: _____
- p. Name And Phone Number Of:
 - Pilot: _____ Phone No: _____
 - Debriefer: _____ Phone No: _____
 - Discovered By: _____ Phone No: _____
- q. Tire QTR Number: _____
- r. Tire Manufacturer By Name: _____
- s. Tire Serial Number: _____
- t. Tire Total Accumulated Landings: _____
- u. Tire Removed From Right / Left Side: _____
- v. Inflation Pressure Prior To Incident: _____
- w. Amount Of Tread Wear And Comments On Tire Wear Pattern: _____
- x. Approximate Temperature At Time Of Event: _____

Describe the Event:

2. SPECIAL INSTRUCTIONS

Encourage units to take digital pictures of failed tires. Please email photos along with any pertinent information to Mr. Dave Frederick, **417 SCMS/GUEB**, david.frederick@hill.af.mil

**After failure, submit DR against the tire(s) and hold for exhibit.
Submit the exhibit per the disposition instructions in response to the DR.**

****Email Completed Checklists to:**

hill.falcon.hotline@hill.af.mil
falconhotline@wpafb.af.mil
david.frederick@hill.af.mil
david.palmer@hill.af.mil

****If E-Mail is not available mail to:**

417 SCMS/GUEB
6040 Gum Lane
Bldg. 1216
Hill AFB, UT 84056-5825

OR

500 ACSS/GFLC
6080 Gum Lane
Bldg 1212
Hill AFB, UT 84056-5825

OR FAX COMPLETED COPIES OF THIS CHECKLIST AND DR COPIES TO:

417 SCMS/GUEB

Fax DSN: 777-9764	Commercial: 801-777-9764
Phone DSN: 775-6384	Commercial: 801-775-6384
Alternate #: 777-5038	Commercial: 801-777-5038

500 ACSS/GFLC

Fax DSN: 777-4900	Commercial: 801-777-4900
Phone DSN: 777-0812	Commercial: 801-777-0812

Attachment 33 (Added)

BRAKE/ANTISKID FAILURE CHECKLIST**Table A33.1. Brake/AntiSkid Failure Checklist.****Fill out this sheet when:**

1. Landing Incident
 1. Aircraft barrier engagement
 2. Blown tires on landing
 3. Abnormal brake/antiskid incident
2. Repeated and recurring antiskid/brake system discrepancies or chronic system discrepancies that appear different each time
 1. 2 or more failures/issues in the last 50 flights, or discretion of field unit
3. Problematic aircraft, where the technicians have exhausted all technical means to repair the system
 1. At discretion of maintenance personnel, but the sooner we know, the faster assistance can be given and the faster the jet can be returned to service

Information Needed:

Aircraft Tail Number:	
Date of Problem (landing incident or fault light):	
RBCU Serial #:	
Wheel Speed Sensor in use:	(circle one): AC DC
TCTO 2442 (wire harness) performed?	(circle one): YES NO
OFP Version:	(circle one): 81U-F16/BCU/OP-F001-00A Rev 001 81U-F16/BCU/OP-F001-00A Rev 003 81U-F16/BCU/OP/AC-F001-00A Rev001 81U-F16/BCU/OP/DC-F001-00A Rev002

Actions Needed:

1. Download and submit fault data file, "eeprom.dat"
2. Download and submit operational data files, "primary1.dat" and "backup1.dat," and "primary2.dat" and "backup2.dat" if applicable (depends on number of landings that occurred on the RBCU)
 1. Note: RBCU must be installed on the aircraft with aircraft power turned on to perform the operational data download.
 2. Record below the number of words downloaded for channel 1 and channel 2 as displayed on the screen during the download process

Channel 1 word count:	
Channel 2 word count:	

Attachment 34 (Added)**SAMPLE EVEN ID NUMBERS BY SECTION****SECTION****JCN**

- A34.1.** IMDS 0001-3999
- A34.2.** Plans, Scheduling, and Documentation
- A34.3.** Engine Management Flight
- A34.4.** MXG Quality Assurance 4555-4579
- A34.5.** 372 Training Squadron, Detachment 12 4580-4749
- A34.6.** Reserved for future use 4750-4999
- A34.7.** Aerospace Ground Equipment (AGE) Flight
- A34.8.** Armament Flight
- A34.9.** Munitions Flight
- A34.10.** Accessory Flight
- A34.11.** Avionics Flight
- A34.12.** Fabrication Flight
- A34.13.** Maintenance Flight
- A34.14.** Maintenance Flight (Phase)
- A34.15.** Propulsion Flight
- A34.16.** F-16 AMU 310th 308th 309th
- A34.17.** F-16 AMU 62d 425th 21st
- A34.18.** Reserved for future use 4050-4074

Attachment 35 (Added)

SAMPLE CSFDR DOWNLOAD WORKSHEET

Table A35.1. Sample CSFDR Download Worksheet.

Date Download Performed (Date when the data was extracted from aircraft)		Base/Unit	Aircraft Serial Number	Aircraft Flight Hours
		Luke AFB / 56 FW		
SAU Serial #	Status	CSFDR OFP	Recorder Reformatted / Cleared	
35351C_____			YES_____ NO_____	
Prepared By			Phone (DSN)	
Name: _____			896-_____	
Comments				
Hard Drive Serial Number				
Date Download Performed (Date when the data was extracted from aircraft)		Base/Unit	Aircraft Serial Number	Aircraft Flight Hours
		Luke AFB / 56 FW		
SAU Serial #	Status	CSFDR OFP	Recorder Reformatted / Cleared	
35351C_____			YES_____ NO_____	
Prepared By			Phone (DSN)	
Name: _____			896-_____	
Comments				
Hard Drive Serial Number				